NUEXCO

Monthly Report

January 1988 Number 233

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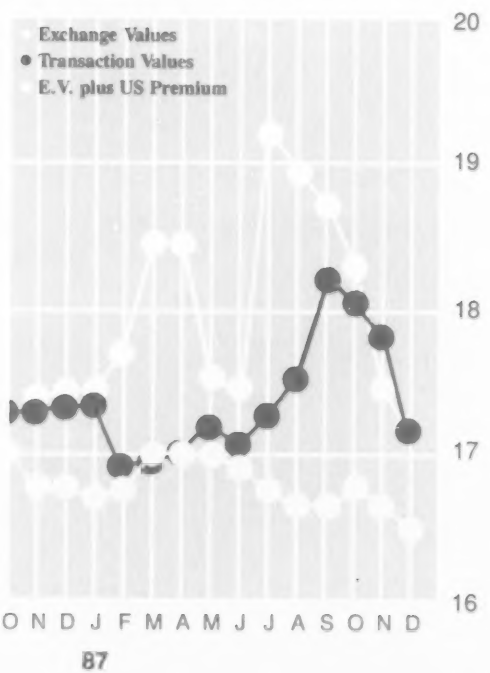
DOE Declares US Uranium Industry Non-Viable for 1986 22



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EXECUTIVE SUMMARY
REPORT 233
(All data as of December 31, 1987)

Exchange Value $16.55, down $0.10

The **Exchange Value** is **$16.55** per pound U_3O_8, down $0.10 since last month. The US Premium (relative to the Exchange Value) is $0.65, down $0.20 since last month.

UF_6 Value $47.00, unchanged

The **UF_6 Value** is **$47.00** per kilogram U as UF_6, unchanged since last month. The US Premium (relative to the UF_6 Value) is $2.00, down $0.25 since last month.

Transactions

Fourteen recent natural uranium sales are reported, involving **7.0 million** pounds equivalent U_3O_8. Eight of the sales involved spot or near-term delivery, and met the conditions for inclusion in the Transaction Value. In addition, six long-term uranium sales are reported. Active spot and near-term **uranium supply** amounts to **4.8 million** pounds U_3O_8 equivalent, down 2.1 million pounds since last month. Active spot and near-term **uranium demand** totals **2.4 million** pounds, up 1.1 million pounds from last month. The spot and near-term **supply-demand ratio** decreased to **2.0 to 1**.

Transaction Value $17.20, down $0.60

The **Transaction Value** is **$17.20** per pound U_3O_8, **down $0.60** since last month. The calculation includes transactions involving a total of 3.9 million pounds U_3O_8 and equivalent UF_6, of which 1.6 million pounds are US-origin, and covers a period of 3 months.

Loan Rate 3.5%, unchanged

The **Loan Rate** is **3.5 percent** per annum, unchanged. No loan transactions are reported.

Conversion Value $1.90, unchanged

The **Conversion Value** is **$1.90** per pound U as UF_6, unchanged since last month. Active secondary market supply for conversion services for delivery within three years totals 700 thousand pounds U as UF_6. Active demand totals 320 thousand pounds U as UF_6. No secondary market conversion transactions are reported.

SWU Value for delivery within one year: $73, unchanged

The **SWU Value** at .3% tails assay and for delivery within one year is **$73** per SWU, unchanged since last month. One secondary market SWU transaction is reported.

* * *

Raw Materials

1987 US uranium production declined approximately 10 percent since 1986, to approximately 12.5 million pounds U_3O_8. This decrease was largely the result of lower production at the Umetco/Energy Fuels White Mesa mill in Blanding, Utah, the shift from production to restoration at USX's south Texas solution mining operations, and the suspension of production at Cotter Corporation's Schwartzwalder mine in Colorado.

United States

The US Energy Information Administration (EIA) has released its annual viability assessment study of the US uranium industry, for the calendar year 1986. Overall, the EIA study showed the industry to be little changed from the previous year, in which it was found non-viable, although several of the indicators showed more positive results. Following the release of the EIA study, Secretary of Energy Herrington declared the industry non-viable for 1986.

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NUEXCO REPORT 233 FIGURES OF THE MONTH (December 31, 1987)	This Month (Report 233)	Last Month (Report 232)	12 Months Ago (Report 221)
Exchange Value ($US per pound U_3O_8)	16.55	16.65	16.75
US Premium for the Exchange Value ($US per pound U_3O_8)	0.65	0.85	0.75
UF_6 Value ($US per kilogram U as UF_6)	47.00	47.00	47.75
US Premium for the UF_6 Value ($US per kgU as UF_6)	2.00	2.25	2.50
Transaction Value ($US per pound U_3O_8 equivalent)	17.20	17.80	17.35
Loan Rate (Per Annum)	3.5%	3.5%	4%
Conversion Value ($US per pound U as UF_6)	1.90	1.90	1.80
Near-Term Uranium Supply[1] (millions of pounds U_3O_8)	4,750	6,845	4.1
Near-Term Uranium Demand[2] (millions of pounds U_3O_8)	2,395	1,275	0.8
Near-Term Supply-Demand Ratio	2.0	5.4	5.2
Recent Uranium Sales:[3]			
Number of Transactions	14	9	1
Quantity of Material (Millions of pounds U_3O_8 equivalent)	7.0	1.8	0.1 - 0.3
Nuexco SWU Value: ($US per SWU) :			
at 0.3 tails assay	73	73	80
US DOE SWU Prices: ($US per SWU)			
USEC	117.00[4]	117.00[4]	119.00[5]
AFC	153.00[6]	153.00[6]	153.00[6]
Requirements	157.00[6]	157.00[6]	157.00[6]
Incentive Price	90.00[7]	90.00[7]	90.00[7]
Market Value of Enriched UF_6[8]: ($US per kgU as UF_6)			
2.5 w/o U_{235}	439	441	459
3.0 w/o U_{235}	562	563	588
3.5 w/o U_{235}	686	688	719
4.0 w/o U_{235}	812	814	852

[1]Active inquiries to sell, for delivery within 12 months after contract signing.

[2]Active inquiries to purchase, for delivery within 12 months after contract signing.

[3]Uranium sales only; does not include loans, conversion, or SWU transactions.

[4]Effective since 10/1/87.

[5]Effective since 10/1/86.

[6]Effective since 10/1/84.

[7]Effective since 10/1/86, for up to 30% of annual requirements.

[8]Calculated using the Nuexco Exchange Value, Conversion Value, SWU Value and 0.30 percent tails assay.

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MONTHLY REPORT ON THE NUCLEAR FUEL MARKET

January 1987 No. 233

R. GENE CLARK, *EDITOR* CHARLES B. LEWIS, *ASSISTANT EDITOR*

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To Our Readers

* * *

Activities of Nuexco's International Advisory Committee

Nuexco's International Advisory Committee has met formally at various times in London, Geneva, Tucson, Washington D.C. and Stockholm. Future meetings are being planned for Tokyo, Toronto, and Johannesburg, with additional sectional meetings in other locations.

Mr. Lee Erdahl has elected to leave the International Advisory Committee at the end of his current term, December 31, 1987. Lee served, until his retirement in July 1984, as President and Chief Executive Officer of Ranchers Exploration Company, a US producer of uranium, silver, copper, and industrial minerals. He has again become active in the uranium production business through his privately-owned Albuquerque Uranium Corporation (AUC), and he has assumed management control of the uranium activities of Intercontinental Energy Corporation. Nuexco, through its Equity Transaction Services Group, advised AUC in the structuring and financing of this undertaking. Nuexco is pleased to have had the benefit of Lee's counsel, and we wish him all the best in his new activity.

* * *

In this issue, we have included several updated historical series of statistics for Australia, Canada and the USA, including historical US Government Prime Interest Rates and Discount Rates.

* * *

The US Supreme Court has granted DOE's petition for *writ of certiorari* in the US Producers vs. DOE lawsuit. This means that the Supreme Court will hear the case. In doing so, the Supreme Court will review the Appeals Court's earlier decision, which found that DOE did not have the discretion *not* to impose restrictions on the enrichment of non-US-origin uranium where a finding of nonviability for the US uranium industry was made. Until such time as the Supreme Court makes a determination in the case, the stay of implementation of the District Court order, granted by the Appeals Court, remains in effect. As of press time, no date had been set by the Supreme Court to hear the case, although a *projected* schedule has oral arguments beginning in April 1988.

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December 31, 1987	Market Values	Active Supply[1] (thousands)	Active Demand[1] (thousands)
EXCHANGE VALUE	**$16.55**/lb. U_3O_8	4,750	2,395
US Premium	**$0.65**		
UF_6 VALUE	**$47.00**/kgU		
US Premium	**$2.00**		
CONVERSION VALUE	**$1.90**/lb. U as UF_6	700	320
SWU VALUE			
0.3 tails assay:	**$73**/SWU	490	255
LOAN RATE	**3.5%**/annum	4,950	0

TRANSACTION VALUE

$/lb. U_3O_8	Millions of Pounds	Number of Transactions	Number of Months
17.20	**3.9**	**23**	**3**

[1]Supply and demand tables in the *Current Market Data* section of this Report detail the numbers for each category.

DEFINITIONS

1. The **Exchange Value** is Nuexco's judgment of the price at which transactions for significant quantities of natural uranium concentrates could be concluded as of the date indicated.
2. The **UF_6 Value** is Nuexco's judgment of the price at which spot and near-term transactions for significant quantities of natural uranium hexafluoride could be concluded as of the date indicated.
3. The **Conversion Value** is Nuexco's judgment of the price at which spot and near-term transactions for significant quantities of conversion services could be concluded in the secondary market as of the date indicated.
4. The **SWU Value** is Nuexco's judgment of the price at which spot and near-term transactions for significant quantities of enrichment services could be concluded as of the date indicated.
5. The **Loan Rate** is Nuexco's judgment of the annual interest rate at which uranium loans could be concluded as of the date indicated.
6. The **Transaction Value** is a weighted average price of recent natural uranium sales transactions. The calculation is based on prices paid in:
   a. Transactions closed within the previous three month period for which delivery is scheduled within one year of the transaction date;
   b. At least ten transactions;
   c. Transactions involving a sum total of at least 2 million pounds U_3O_8 equivalent.

   The sample time is extended as necessary to include these minima. Other currencies are converted to US dollars using conversion rates in effect on or near the transaction date.
7. The **US Premium** is Nuexco's judgment of the incremental price (relative to the Exchange Value or UF_6 Value, as applicable) at which transactions for significant quantities of natural uranium could be concluded as of the date indicated, if the buyer will accept only US-origin.

DERIVATIONS AND COMMENTS

1. All Market Values are based on:
   a. Data from recently completed transactions.
   b. Data from pending transactions.
   c. Firm bids to buy or borrow, and firm offers to sell or lend.
   d. Prices purchasers or rates borrowers have expressed a willingness to pay, but for which Nuexco is not aware of firm bids to buy or borrow, and prices sellers or rates lenders have expressed awillingness to accept, but for which Nuexco is not aware of firm offers to sell or lend.
2. Prices associated with deliveries under old or renegotiated contracts or other than arm's-length transactions are not included in the determination of these Market Values.
3. In the determination of prices, Nuexco does not consider transportation charges other than those customarily provided by suppliers .
4. The prices of services or materialss delivered under long-term contracts with primary suppliers are not considered in the determination of the listed values.
5. For the SWU Value, Nuexco converts SWU prices at varying tails and product assays to equivalent SWU prices at a tails assay of 0.30 weight percent U_{235} and a product assay of 3.0 weight-percent U_{235}, assuming feed costs corresponding to the Nuexco Exchange and Conversion Values determined as of the same date.
6. In calculating the Transaction Value, Nuexco does not account for the price of uranium delivered in connection with contracts which call for "market price" mechanisms. This exclusion applies particularly to contracts in which delivery prices are expressed as a function of future Exchange Values or any other indeterminate variable. Also excluded from the calculation are any other transactions in which the delivery price is defined in such a way that it cannot currently be determined.

PRICING

NATURAL URANIUM AND SECONDARY MARKET CONVERSION

(All data as of December 31, 1987)

The **Exchange Value** is **$16.55** per pound U_3O_8, down $0.10 since last month. US-origin uranium is commanding a **premium** (relative to the Exchange Value) of **$0.65** per pound U_3O_8 (down $0.20) in the form of concentrates, and **$2.00** per kilogram U (down $0.25) in the form of UF_6. **Active supply** of natural uranium (concentrates and UF_6) for spot or near-term delivery totals **4,750,000** pounds U_3O_8 equivalent, down 2,095,000 pounds since last month. The corresponding figure for **active demand** is **2,395,000** pounds, up 1,120,000 pounds. The spot and near-term supply-demand ratio decreased to 2.0 to 1.

The *Current Market Data* section of this Report lists nine U_3O_8 sales, totaling approximately 4.3 million pounds U_3O_8 equivalent.

The **Transaction Value** is **$17.20** per pound U_3O_8, down $0.60 since last month. The calculation extends over a 3-month period and includes 23 transactions involving 3.9 million pounds equivalent U_3O_8.

The **UF_6 Value** is **$47.00** per kilogram U in UF_6, unchanged since last month. Five transactions involving UF_6 are reported, totaling approximately 2.7 million pounds equivalent U_3O_8.

The **Conversion Value** is **$1.90** per pound U as UF_6, unchanged since last month. Active supply of secondary market conversion services totals 700 thousand pounds U as UF_6. Active demand totals 320 thousand pounds U as UF_6. No secondary market conversion transactions are reported.

The **Loan Rate** is **3.5 percent** per annum, unchanged since last month. No loan transactions are reported.

* * *

The **Exchange Value** declined $0.10, to $16.55 per pound U_3O_8 this month, reflecting increased competition among sellers for available opportunities. The **Premium** (relative to the Exchange Value) for US-origin U_3O_8 declined $0.20, to $0.65 per pound U_3O_8. Sellers of US-origin material became increasingly aggressive toward the end of the year, offering their uranium at prices near the $17.20 level (the Exchange Value plus the US Premium), even though the US Supreme Court has not yet decided to grant or deny DOE's petition for *writ of certiorari* in the US Producers vs. DOE lawsuit.

Active demand for U_3O_8 increased somewhat during December, although most of that demand is discretionary. At the end of the month, three US utilities were evaluating proposals for moderate quantities of material.

Six spot U_3O_8 transactions are reported this month, involving approximately 1,300,000 pounds. Of those transactions, about 350,000 pounds involved US-origin uranium. In addition, three long-term U_3O_8 transactions are reported, involving approximately 3,000,000 pounds bought by a US utility within the past few months, some of which was of US-origin. Altogether, transactions involving over 2 million pounds of US-origin U_3O_8 are reported this month.

Ever since the beginning of the US Producer vs. DOE lawsuit, anticipation of a favorable outcome has kept many US producers out of the near-term market. Near the end of the year, however, financial requirements typically have overridden the hope for prices near the $20 per pound level, and some producers have pursued spot sales. This year was no exception, and at least four US utility purchases of US-origin U_3O_8 in November and December involved US producers selling at reduced prices in the spot market.

The US-Canada Free Trade Agreement, which was signed by President Reagan and Prime Minister Mulroney on January 2, 1988, also has added downward pressure to the US Premium. The FTA has the potential to moot the effect of a producer victory in the Producers vs. DOE lawsuit by effectively disallowing any market restrictions for Canadian-origin uranium.

Several members of Congress have expressed concern over the Reagan Administration's lack of consultation with Congress on controversial provisions of the FTA, including the uranium issue. Representative Dan Rosenkowski (D-Illinois), Chairman of the House Ways and Means Committee and Senator Lloyd Bentsen (D-Texas), Chairman of the Senate Finance Committee stated the following in a December 3 letter to Tresury Secretary James Baker and US Trade Representative Clayton Yeutter: "With respect to the Canada FTA, however, the issue now is what type of procedure we will follow after the agreement is signed. In this regard, we must point out that the Congressional schedule next year makes it unlikely that we will be able to complete action on a draft implementing bill before June 1, 1988. We therefore propose that the Administration not submit a bill to implement the FTA

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under expedited procedures earlier than June 1, 1988." If such a schedule for implementation of the FTA actually occurs, Congressional approval could wait until perhaps September or even later.

The **UF_6 Value** remained unchanged during December, and the Premium (relative to the UF_6 Value) for US-origin UF_6 declined $0.25, to $2.00. Activity in the market for UF_6 increased in December, even though the active supply of UF_6 remains relatively weak, particularly of US-origin UF_6. Two spot UF_6 transactions are reported, totaling approximately 100,000 pounds U_3O_8 equivalent; one of those transactions involved US-origin material. In addition, three long-term UF_6 transactions are reported, involving approximately 2,500,000 pounds U_3O_8 equivalent. One of those long-term transactions also involved US-origin UF_6. As of the end of the month, two US utilities and at least one non-US utility were evaluating UF_6 offers.

* * *

The **Loan Rate** remained unchanged this month, at 3.5 percent per annum. Although little or no firm demand exists for loans, the supply of material available for loan remains substantial. No loan transactions are reported this month.

* * *

The **Conversion Value** remains unchanged this month at $1.90 per pound U as UF_6, and no conversion transactions are reported. Demand for secondary market conversion services has increased somewhat, as one US utility entered the market seeking a substantial quantity of conversion. Another potential seller of conversion services has entered the market, adding to the active supply. Sellers of excess conversion services tend to require relatively fixed sale prices, determined by the economics of selling versus deferring contractual obligations. Conversely, holders of UF_6 may find it necessary to discount the conversion component in order to sell the U_3O_8 component. Thus, conversion buyers who can find *deconversion swap* opportunities can realize measurable savings on their conversion.

ENRICHED URANIUM AND SWU

The **SWU Value** is $73 per SWU, unchanged since last month. One transaction took place in December involving a substantial quantity of non-DOE-origin SWU, bought by a European utility. Currently, there are a few inquiries by US utilities for non-DOE SWU. These inquiries, however, may not represent firm SWU demand, and may have been undertaken largely to support utilities' contingency plans should the US Supreme Court uphold the earlier Appeals Court decision in the US Producers vs. DOE lawsuit, a situation that could lead to a ban on DOE's enrichment of non-US-origin uranium. The presence of this market activity also could have the effect of inducing other utilities, those having unfilled SWU requirements, to enter the market sooner than they normally would.

There still exists a wide range of prices for various SWU origins. DOE, Eurodif, and Urenco SWU make up the high end of that range, while purchasers that can take SWU of Techsnabexport (USSR) origin may be able to obtain prices below the Nuexco SWU Value.

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CURRENT MARKET DATA

EXCHANGE VALUE EXPRESSED IN SELECTED PRODUCER & CONSUMER CURRENCIES[1]

Country (currency)	per lb. U_3O_8 in Concentrates			per kg. U in Concentrates		
	This Month (Dec 31, 1987)	Last Month (Nov 30, 1987)	12 Months Ago (Dec 31, 1986)	This Month (Dec 31, 1987)	Last Month (Nov 30, 1987)	12 Months Ago (Dec 31, 1986)
Australia (dollar)	22.97	24.02	25.21	59.72	62.43	65.55
Belgium (comm. franc)	552.22	580.34	678.06	1,436	1,509	1,763
Canada (dollar)	21.55	21.80	23.16	56.02	56.69	60.20
EEC (ecu)	12.81	13.47	15.73	33.31	35.02	40.90
Finland (markka)	65.70	68.01	80.65	170.81	176.82	209.68
France (franc)	89.36	94.33	108.00	232.32	245.25	280.77
FRG (mark)	26.40	27.82	32.58	68.62	72.34	84.70
Italy (lira)	19,480	20,462	22,681	50,643	53,197	58,966
Japan (yen)	2,041	2,245	2,677	5,305	5,837	6,961
Netherlands (guilder)	29.71	31.30	36.85	77.23	81.38	95.81
South Africa (rand)	31.92	32.84	36.81	82.98	85.38	95.71
Spain (peseta)	1,801	1,866	2,219	4,683	4,852	5,768
Sweden (krona)	96.50	100.30	114.10	250.88	260.76	296.64
Switzerland (franc)	21.35	22.84	27.22	55.50	59.39	70.76
UK (pound)	8.91	9.28	11.40	23.16	24.13	29.64
US (dollar)	16.55	16.65	16.75	43.03	43.29	43.55

TRANSACTION VALUE EXPRESSED IN SELECTED PRODUCER & CONSUMER CURRENCIES[1]

Country (currency)	per lb. U_3O_8 in Concentrates			per kg. U in Concentrates		
	This Month (Dec 31, 1987)	Last Month (Nov 30, 1987)	12 Months Ago (Dec 31, 1986)	This Month (Dec 31, 1987)	Last Month (Nov 30, 1987)	12 Months Ago (Dec 31, 1986)
Australia (dollar)	23.87	25.62	26.12	62.06	66.75	67.90
Belgium (comm. franc)	573.91	620.43	702.34	1,492	1,613	1,826
Canada (dollar)	22.40	23.31	23.99	58.22	60.60	62.36
EEC (ecu)	13.32	14.40	16.30	34.62	37.44	42.37
Finland (markka)	68.28	72.71	83.54	177.52	189.04	217.19
France (franc)	92.87	100.85	111.86	241.45	262.19	290.82
FRG (mark)	27.43	29.75	33.75	71.32	77.33	87.73
Italy (lira)	20,245	21,875	23,494	52,632	56,871	61,078
Japan (yen)	2,121	2,400	2,773	5,514	6,240	7,210
Netherlands (guilder)	30.87	33.46	38.17	80.27	87.00	99.24
South Africa (rand)	33.17	35.11	38.13	86.24	91.27	99.13
Spain (peseta)	1,872	1,995	2,298	4,867	5,187	5,974
Sweden (krona)	100.29	107.23	118.19	260.74	278.77	307.26
Switzerland (franc)	22.19	24.42	28.19	57.68	63.49	73.30
UK (pound)	9.26	9.92	11.81	24.07	25.80	30.71
US (dollar)	17.20	17.80	17.35	44.72	46.28	45.11

[1]Calculated using currency exchange rates published in the *Wall Street Journal* on the last working day of the month.

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CONVERSION VALUE EXPRESSED IN SELECTED PRODUCER & CONSUMER CURRENCIES[1]

Country (currency)	per lb. U as UF_6			per kg. U as UF_6		
	This Month (Dec 31, 1987)	Last Month (Nov 30, 1987)	12 Months Ago (Dec 31, 1986)	This Month (Dec 31, 1987)	Last Month (Nov 30, 1987)	12 Months Ago (Dec 31, 1986)
Australia (dollar)	2.64	2.74	2.71	5.81	6.04	5.97
Belgium (comm. franc)	63.40	66.23	72.87	139.77	146.00	160.64
Canada (dollar)	2.47	2.49	2.49	5.45	5.49	5.49
EEC (ecu)	1.47	1.54	1.69	3.24	3.51	3.73
Finland (markka)	7.54	7.76	8.67	16.63	17.11	19.11
France (franc)	10.26	10.76	11.61	22.62	23.73	25.59
FRG (mark)	3.03	3.18	3.50	6.68	7.00	7.72
Italy (lira)	2,236	2,335	2,437	4,930	5,148	5,373
Japan (yen)	234.28	256.20	287.72	516.50	564.83	634.32
Netherlands (guilder)	3.41	3.57	3.96	7.52	7.88	8.73
South Africa (rand)	3.66	3.75	3.96	8.08	8.26	8.72
Spain (peseta)	206.81	212.98	238.41	455.95	469.54	525.60
Sweden (krona)	11.08	11.45	12.26	24.42	25.23	27.03
Switzerland (franc)	2.45	2.61	2.93	5.40	5.75	6.45
UK (pound)	1.02	1.06	1.23	2.25	2.34	2.70
US (dollar)	1.90	1.90	1.80	4.19	4.19	3.97

SWU VALUE AND UF_6 VALUE EXPRESSED IN SELECTED PRODUCER & CONSUMER CURRENCIES[1]

Country (currency)	SWU Value at 0.30% tails assay (Dec 31, 1987)	UF_6 Value per kg.U in UF_6 This Month (Dec 31, 1987)	UF_6 Value per kg.U in UF_6 Last Month (Nov 30, 1987)
Australia (dollar)	101.32	65.23	67.79
Belgium (comm. franc)	2,436	1,568	1,638
Canada (dollar)	95.05	61.19	61.55
EEC (ecu)	56.51	36.38	38.02
Finland (markka)	289.80	186.58	191.99
France (franc)	394.17	253.77	266.28
FRG (mark)	116.43	74.96	78.54
Italy (lira)	85,923	[illegible]220	57,761
Japan (yen)	9,001	[illegible]5	6,338
Netherlands (guilder)	131.04	[illegible]6	88.36
South Africa (rand)	140.79	[illegible]4	92.70
Spain (peseta)	7,946	[illegible]5	5,268
Sweden (krona)	425.66	[illegible]5	283.13
Switzerland (franc)	94.17	60.62	64.48
UK (pound)	39.30	25.30	26.20
US (dollar)	73.00	47.00	47.00

[1]Calculated using currency exchange rates published in the *Wall Street Journal* on the last working day of the month.

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CURRENT MARKET DATA

RECENT TRANSACTIONS[1]

Uranium Sales

Nuexco Transaction Number	Delivery Period	Approximate Quantity (thousands of pounds, U_3O_8 equivalent)	Approximate Price Range as Percent of Current Exchange or UF_6 Value[2]	Seller	Buyer	Remarks
4216	1987	less than 50	98—102	Producer	Intermediary	US-Origin
4217	1989-95	601-1,000	R[3]	Producer	Utility	US-Origin
4218	1989-95	601-1,000	R[3]	Producer	Utility	US-Origin
4219	1989-93	1,001-1,500	R[3]	Producer	Utility	
4220	1987	less than 50	98—102	Producer	Intermediary	US-Origin
4221	1988-90	1,001-1,500	See Remarks	R[3]	Intermediary	UF_6. Base-price escalated
4228	1988	50-100	98—102	Intermediary	Utility	US-Origin UF_6
4229	1987	101-300	98—102	Intermediary	Utility	US-Origin
4230	1988-92	601-1,000	See Remarks	Intermediary	Utility	UF_6. Base-price escalated
4231	1988	50-100	98—102	Producer	Utility	US-Origin
4234	1988-90	301-600	See Remarks	Intermediary	Utility	US-Origin UF_6 Base-price escalated
4235	1988	301-600	98—102	Intermediary	Utility	
4236	1988	301-600	98—102	Intermediary	Utility	
4237	1988	less than 50	93—97	Intermediary	Utility	UF_6

[1] Transactions listed are not limited to those in which Nuexco was involved, but also include others of which Nuexco is aware.

[2] Where US-origin material is involved, the range is based on the Exchange Value (or UF_6 Value) *plus* the premium (relative to the Exchange Value or UF_6 Value). The range reflects five percentage points (inclusive) per grouping, centered about the middle of the range.

[3] The notation R means that Nuexco either does not know, or that Nuexco has restricted that information to protect client or source confidentiality.

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Enrichment Services
Secondary Market Sales

Nuexco Transaction Number	Delivery Period	Approximate Quantity[4] (thousands of SWU)	Approximate Price Range as Percent of Current SWU Value[5]	Seller	Buyer	SWU Origin	Remarks
4238	1988	101-300	R[3]	Intermediary	Utility		

[1]Transactions listed are not limited to those in which Nuexco was involved, but also include others of which Nuexco is aware.
[2] Where US-origin material is involved, the range is based on the Exchange Value (or UF6 Value) *plus* the premium (relative to the Exchange Value or UF6 Value). The range reflects five percentage points (inclusive) per grouping, centered about the middle of the range.
[3]The notation R means that Nuexco either does not know, or that Nuexco has restricted that information to protect client or source confidentiality.
[4]If tails assay is unknown or unspecified, Nuexco's calculation of SWU quantity assumes 0.30 w/o tails assay.
[5]Prices are usually normalized to 0.30% tails assay. Refers to SWU Value that corresponds to SWUs included in transaction. When prices and SWU values are expressed as discounts from a reference price (e.g., X dollars less than DOE's USEC base price at time of delivery), the percentage price range is based on the discounted prices, not on the reference price.

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CURRENT MARKET DATA

URANIUM SUPPLY
(December 31, 1987)

Nuexco Project Number	Delivery Period[1] (Thousands of Pounds U_3O_8) Spot or Near-term[2]	Intermediate or Long-term	Remarks
Available for Sale:			
ACTIVE			
87-1005*	200	400 per year	1988-95
87-1023	500	500 per year	1987-90
87-1053	100	400 per year	1989 on
87-1055	200	300 per year	1988-93
87-1061	200	200 per year	UF_6, 1988 on
87-1123	400	—	
87-1130	750	—	
87-1141	200	200 per year	1989-92
87-1152	200	—	
87-1156*	825	—	
87-1161*	1,000	1,000 per year	
87-1175*	175	—	UF_6
87-1001	—	400 per year	1989 on
TOTAL:	4,750		
INACTIVE			
87-1002*	270	—	
87-1017	1,000	—	
87-1059	120	—	UF_6
87-1120	1,000	—	
87-1135	500	—	
87-1142*	150	—	
87-1159*	40	—	
87-1019	—	600 per year	1988-91
TOTAL:	3,080		

*New or revised since last month.
[1]Measured from the date of this Report.
[2]For delivery within one year. This category excludes material deliverable within one year under other than spot or near-term contracts.
Projects removed since last month: 1091, 1124.

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URANIUM DEMAND
(December 31, 1987)

Nuexco Project Number	Delivery Period[1] (Thousands of Pounds U_3O_8) Spot or Near-term[2]	Intermediate or Long-term	Remarks
Inquiries to Purchase: ACTIVE			
87-1030	175	—	1988
87-1121	650	650 per year	1988-96
87-1122*	500	—	1988
87-1138*	130	—	UF_6
87-1158*	150	—	U_3O_8 or UF_6
87-1163*	160	—	1989-92
87-1169*	260	—	U_3O_8 or UF_6
87-1174*	260	—	1988
87-1176*	110	—	1988
87-1013	—	1,200 per year	1990-95
87-1021*	—	200 per year	1992 on
87-1108	—	200 per year	1991-2000
87-1134	—	260	1989
87-1150	—	1,000 per year	1989-92
87-1166*		650	1989, UF_6
87-1172*	—	500 per year	1990 on
TOTAL:	2,395		
INACTIVE			
87-1040	300	300	1989
87-1049	—	700 per year	1989-96
87-1114	525	—	
87-1125	390	—	
87-1146	3	—	
TOTAL:	1,218		

*New or revised since last month.
[1]Measured from the date of this Report.
[2]For delivery within one year. This category excludes material deliverable within one year under other than spot or near-term contracts.
Projects removed since last month: 1107, 1124, 1140.

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CURRENT MARKET DATA

LOAN SUPPLY AND DEMAND
(December 31, 1987)

Nuexco Project Number	Delivery Period[1] (Thousands of Pounds U_3O_8) Within 1 Year	Beyond 1 Year	Remarks
Available for Loan:			
ACTIVE			
87-1119	500	—	
87-1157	4,000	—	
87-1167*	450	—	
TOTAL:	4,950		
INACTIVE			
87-1012	2,000	—	
87-1031	1,000	—	
87-1033	1,000	—	
87-1071	1,000	—	UF_6
TOTAL:	5,000		

*New or revised since last month.
[1]Measured from the date of this Report.
Projects removed since last month: 1066.

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CONVERSION SUPPLY AND DEMAND
(December 31, 1987)

Nuexco Project Number	Delivery Period[1] (Thousands of Pounds U as UF_6) Within 3 Years	Beyond 3 Years	Remarks
Available for Sale:			
ACTIVE			
87-1155	550	—	
88-1004*	150	—	
TOTAL:	700	750	
INACTIVE			
87-1008	750	750	
TOTAL:	750		
Inquiries to Purchase:			
ACTIVE			
87-1132	220	—	
87-1160*	100	—	
TOTAL:	320		
INACTIVE			
87-1072	440	—	
TOTAL:	440		

*New or revised since last month.
[1]Measured from the date of this Report.
Projects removed since last month: 1009, 1122.

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CURRENT MARKET DATA

SWU SUPPLY AND DEMAND
(December 31, 1987)

Nuexco Project Number	Delivery Period[1] (Thousands of SWU) Spot or Near-term[2]	Intermediate or Long-term	Remarks
Available for Sale:			
ACTIVE			
87-1058	90	—	1988
87-1068	100	—	1988
87-1096	300	—	1988
TOTAL:	490		
INACTIVE			
87-1004	55	—	1988
87-1128	300	—	1988
87-1130	150	—	1989
TOTAL:	530		
Inquiries to Purchase:			
ACTIVE			
87-1162*	100	—	1988
87-1171*	130	—	1988
87-1154*	25	—	1988
TOTAL:	255		
INACTIVE			
87-1065	150	—	1988
87-1116*	100	—	1989
TOTAL:	250		

*New or revised since last month.
[1]Measured from the date of this Report.
[2] For delivery within one year. This category excludes SWU deliverable within one year under other than spot or near-term contracts.
Projects removed since last month: 1059.

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1987 US URANIUM PRODUCTION ACTIVITIES

Introduction

In 1987, political and legal uncertainties continued to dominate the US uranium industry. These uncertainties — the US Producer vs. DOE lawsuit, potential legislation and the pending Free Trade Agreement with Canada — acted to limit development and to constrain expenditures on all but the most economically attractive projects.

Overall, the US uranium production industry was fairly stable, although at rather low production levels, during 1987. Data available at the end of the year indicate that production from all sources totaled approximately 12,500,000 pounds U_3O_8, a decrease of 10 percent from 1986 production of 13,900,000 pounds. Changes at three production facilities largely accounted for the drop in output:

1. Cotter Corporation's Schwartzwalder mine in Colorado suspended operations in January;
2. USX Corporation's (formerly U.S. Steel) south Texas solution mining operations changed over from production to restoration in early 1987; and,
3. Production at the Umetco Minerals/Energy Fuels Nuclear White Mesa mill declined by 400,000 pounds to 4,500,000 pounds U_3O_8.

The distribution of production between conventional, by-product and solution mining remained similar to 1986 (Table 1).

Table 1

DISTRIBUTION OF US PRODUCTION BY TYPE*
(Millions of Pounds U_3O_8)

	1982	1983	1984	1985	1986	1987
By-Product	3.2	3.1	3.1	3.6	3.6	3.7
Conventional	20.6	14.8	9.5	5.4	8.8	7.8
Solution Mining	3.0	2.8	2.1	2.1	1.5	1.0
Total	26.8	20.7	14.7	11.1	13.9	12.5

*Nuexco estimates.

Conventional Producers

The Colorado Plateau and the Arizona Strip — Nuexco estimates that the White Mesa uranium mill at Blanding, Utah produced about 4,500,000 pounds U_3O_8 in 1987; 3,800,000 to the account of **Energy Fuels Nuclear** and its Swiss partners, and 700,000 to the account of **Umetco Minerals Corp.** The mill's 1986 production was 4,900,000 pounds. (Table 2 shows the status of conventional uranium mills in the USA.)

The White Mesa mill was built by Energy Fuels and its partners in 1980, to process medium-grade (0.10 to 0.20 percent U_3O_8) ores from a variety of independent and company-owned mines in the Hanksville/Blanding region. The lower uranium prices in the early 1980s forced most of those mines to close. During the same period, however, Energy Fuels' aggressive exploration program in northern Arizona made discoveries of high-grade (over 0.30 percent U_3O_8) ores in breccia pipes. Thus, while the mill was designed to produce about 1,600,000 pounds U_3O_8 per year, the availability of these higher-grade ores have permitted an output of almost 5,000,000 pounds per year during the last two years.

Energy Fuels has mined breccia-pipe ores from the Hack Canyon and Pigeon mines on the north side of the Grand Canyon. The Hack Canyon pipes (3 in all) have been mined out and the mine area currently is being reclaimed. A new mine, Kanab North, is ready to begin production for Energy Fuels in 1988. The Pine Nut and Hermit mines are being developed and are expected to start producing in 1990. Development of the Canyon pipe, the first new mine on the south side of the Grand Canyon, has been repeatedly delayed by environmentalist opposition. The mine's location on the south side of the Canyon between Grand Canyon Village and Flagstaff also gives it a higher visibility than most other mines in the region.

Umetco Minerals, a subsidiary of Union Carbide Corporation, has a 70-percent interest in the White Mesa mill but does not have sufficient high-grade reserves to fully utilize its share of the mill's production capability under current market conditions. During 1987, Umetco produced approximately 700,000 pounds of U_3O_8 from ores mined in the Egnar Plains area on the Colorado/Utah border.

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RAW MATERIALS

Table 2

1987 OPERATING STATUS OF CONVENTIONAL URANIUM MILLS IN THE USA

Company	Approximate Operating Schedule or Status	Rated Capacity[1]	Location
Active Mills			
Chevron Resources Co.	Partial	2,500	Hobson, Texas
Cotter Corp.	Suspended	1,200	Canon City, Colorado
Homestake Mining Co.	Partial	3,400	Grants, New Mexico
Pathfinder Mines	Partial	2,800	Gas Hills, Wyoming
Pathfinder Mines	Partial	1,800	Shirley Basin, Wyoming
Rio Algom Corp.	Full	750	La Sal, Utah
Umetco/ Energy Fuels Nuclear	Periodic	2,000	Blanding, Utah
Umetco (Union Carbide)	Heap Leaching	1,400	Gas Hills, Wyoming
Inactive Mills[2]			
American Nuclear Corp.	Inactive	950	Gas Hills, Wyoming
Anaconda (ARCO)	Inactive[3]	6,000	Grants, New Mexico
Atlas Minerals	Inactive	1,400	Moab, Utah
Bear Creek Uranium	Dismantled	2,000	Powder River Basin, Wyoming
Bokum Resources Corp.	Incomplete	2,000	Marquez, New Mexico
Conoco/Pioneer	Dismantled	3,400	Falls City, Texas
Dawn Mining Company	Inactive	450	Ford, Washington
Exxon Minerals Company	Dismantled	3,200	Powder River Basin, Wyoming
Quivira Corp. (Kerr-McGee)	Inactive	7,000	Grants, New Mexico
Minerals Exploration Company	Inactive	3,000	Red Desert, Wyoming
Petrotomics Company	Dismantled	1,500	Shirley Basin, Wyoming
Plateau Resources Ltd.	Inactive	1,000	Ticaboo, Utah
Sohio Western Mining	Dismantled	1,600	Cebolleta, New Mexico
Umetco (Union Carbide)	Inactive	1,300	Uravan, Colorado
UNC Resources	Inactive[4]	3,000	Church Rock, New Mexico
Western Nuclear Inc.	Inactive	1,700	Jeffrey City, Wyoming
Western Nuclear Inc.	Inactive	2,000	Wellpinit, Washington

[1]Capacity in tons of ore per day (tpd).
[2]Mill inactive throughout 1987.
[3]Decommissioning expected to begin in 1988.
[4]Decommissioning plan currently under review by the NRC.

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Since the White Mesa mill has a greater capacity than its tributary mines, it will be closed through mid-1988, while the miners build up sufficient stockpiles for an operating run of 8 to 12 months. A modest improvement in the uranium market, coupled with a favorable outcome in the miners' legal contest with those opposing development at the Grand Canyon's southern rim, as well as continued production by Umetco, could result in long-term, full utilization of the mill's capacity. Such utilization would enable the White Mesa mill to continue as the foremost US production facility.

Only **Homestake Mining Co.** continued to produce some U_3O_8 by conventional methods in the Grants, New Mexico area. At the company's Section 23 mine, a small crew is mining small quantities of higher-grade material.

Rio Algom Corp. continued to operate its Lisbon, Utah mill, using both company and outside-source ore to produce about 700,000 pounds U_3O_8 in 1987. Presently, however, the company is operating the mill on a day-to-day basis, as Lisbon's reserves are nearly depleted and uranium prices remain low. Production from its deep (2,600 feet, 800 meters), underground mine began in 1972, making it one of the longest-producing US uranium mines.

One more veteran uranium producer may have dropped out of the business in 1987; **Atlas Corporation** announced plans to liquidate its uranium assets in order to concentrate efforts on precious metals. The Atlas mill in Moab, Utah was licensed in 1956 and was producing 1,800,000 pounds per year as recently as 1982. Atlas' decision to withdraw from uranium follows problems with the NRC in re-licensing the mill. Even after announcing its withdrawal, however, Atlas has continued to press for renewal of its NRC license and that renewal currently is under review by the NRC.

The South Texas Region — A joint venture of **Chevron Resources Co.** (60 percent) and **Total Minerals Corp.** (40 percent) has started development at Rhode Ranch. Ore from this shallow deposit will be processed at Chevron's Panna Maria mill, which currently is treating ore from its Mt. Taylor mine. Production from Rhode Ranch is expected to begin in January 1988, at a rate of over 1,000,000 pounds U_3O_8 per year. This development is particularly notable as the first new US open-pit mine since the late 1970s.

Anaconda Minerals Company, a subsidiary of the Atlantic Richfield Corp., had previous title (25 percent) to the Rhode Ranch deposit along with Concorde Oil Company (25 percent), Ensearch Corporation (25 percent), Rutherford Oil Corporation (12.5 percent) and the Rowe Estate (12.5 percent). The joint venture received a license from the NRC to build a uranium mill at the Rhode Ranch site in October 1982, but the project was not developed at that time.

The Rhode Ranch project is 80 miles south of Chevron's Panna Maria mill, which was built to process ore from Chevron's Panna Maria open-pit mine. This mine was placed on standby in June 1985. Uranium deposits at Rhode Ranch average less than 100 feet in depth and are higher grade (over 0.20 percent U_3O_8) than most deposits in the south Texas region. Chevron probably will use most of the Panna Maria mine equipment for mining at Rhode Ranch, and ship the ore produced to Panna Maria by truck.

Chevron acquired the Mt. Taylor project when it bought Gulf Oil Co. in 1984. Gulf developed the mine during the late 1970s but was unable to sustain production. Under Gulf, the mine produced about 1,800,000 pounds U_3O_8 from a resource exceeding 100,000,000 pounds. The mine was placed on standby in 1982. Chevron wrote off Gulf's capital investment ($430 million) and revised their mine plan to concentrate on higher-grade ores and reduced tonnage.

Currently, Mt. Taylor produces about 600 tons of ore per day at an average grade of about 0.5 percent U_3O_8, totaling about 1,500,000 pounds U_3O_8 per year. Ore from Mt. Taylor is transported to the Panna Maria mill, a distance of over 900 miles, by rail. Chevron continues to evaluate various options which might utilize some of the shutdown mill capacity in the Grants, New Mexico area. This capacity includes Anaconda's Bluewater mill, the Quivira Mining Co. mill, the Homestake mill and Bokum Resources Corporation's nearly completed Marquez mill. Homestake currently is milling small quantities of lower-grade stockpiled material from the Mt. Taylor mine on a test basis. Should market conditions allow, the Mt. Taylor mine has the reserves and production capability to at least double its current output. In that instance, local milling might assume an even greater importance.

Colorado — The **Cotter Corporation's** Schwartzwalder mine near Golden, Colorado suspended operation in

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January 1987. This mine has produced approximately 15,000,000 pounds U_3O_8 during its 35-year operating life. The mine uses a radiometric sorter to reduce waste in the relatively high grade (about 0.30 percent U_3O_8) ore prior to shipping it to Cotter's mill at Cañon City, Colorado. This mill was built in 1979 as an acid leach plant, replacing the original alkaline circuit mill built there in 1958. Cotter also had some minor production from its Thornberg mine, using a contractor who shipped the ore to Rio Algom's Lisbon mill.

Wyoming — The only open-pit uranium mines that operated in the USA during 1987 were **Pathfinder Mines Corporation's** Shirley Basin and Gas Hills, Wyoming properties. These operations produced somewhat more than 500,000 pounds U_3O_8 in 1987. The Gas Hills mill, which was built in 1958, recently has been refurbished and is operating below capacity processing low-grade stockpiles. The mill was closed for over two years before reactivation in July 1987. Mining operations also were suspended during that period and are not expected to resume prior to the spring of 1988.

Pathfinder conducted both underground and solution mining in the Shirley Basin from 1960 through 1970, when the open pit was developed. Current plans at Shirley Basin include a short shutdown of the mill in the near future so that waste stripping can uncover more ore, followed by a gradual increase back to an annual production level of about 12,000,000 tons of waste, 220,000 tons of ore and 750,000 pounds of U_3O_8.

Solution Mining

In 1987, US uranium production from solution mining declined to less than one million pounds U_3O_8 for the first time since 1975. Both **USX Corp.** and **Everest Minerals Corp.** moved from active production to restoration at previously high-output production centers. A number of recent developments, however, could result in a significant increase in future production from solution mining. Table 3 shows the status of solution mining projects in the USA.

Texas and New Mexico — The Clay West project began operation in 1975 as the largest uranium solution mining project built to that date, with an initial capacity of 250,000 pounds U_3O_8 per year. At that time, the ownership of the project was split between Atlantic Richfield (50 percent, operator), U.S. Steel (25 percent) and Dalco (25 percent). Since 1975, the project has been scaled up, producing a high of 1,200,000 pounds in 1981, and ownership has changed to include only U.S. Steel, now **USX Corp.**, (50 percent, operator) and **Niagara Mohawk Power Corp.** (50 percent). Recent production from the Clay West project has been in the range of 500,000 to 800,000 pounds per year; 1987 production is estimated to be approximately 100,000 pounds U_3O_8, as much of the changeover from production to restoration was made in early 1987. USX's wholly-owned and adjoining project, Burns Ranch, was shut down in July 1986.

Everest Minerals' Mt. Lucas project changed over to restoration in late 1987, after averaging about 500,000 pounds per year since 1984. In December 1987, Everest started up the Tex-1 project which, in combination with the nearby satellite Gruy project (expected to start up in 1988), is scheduled to produce 500,000 pounds U_3O_8 per year through Everest's Hobson recovery facility.

Malapai Resources Co. bought the Holiday/El Mesquite and O'Hern properties in south Texas from Mobil Oil in late 1987. Under Mobil's management, these properties produced about 500,000 pounds in 1981, but smaller quantities more recently.

Uranium Resources, Inc. (URI) is preparing its Kingsville Dome and Rosita projects to begin production in 1988. Kingsville Dome is scheduled to start operating in April 1988, at a production rate of 800,000 pounds U_3O_8 per year. Rosita is scheduled to begin production in July 1988, at a rate of 500,000 pounds U_3O_8 annually. URI also is preparing a solution mining permit application for its Churchrock, New Mexico project, formerly operated as a conventional underground mine by United Nuclear Corp.

Total Minerals Corp. acquired the West Cole project from Tenneco Minerals in 1987. This project is located in Webb County, Texas and was placed on standby by Tenneco in 1984. Total reactivated the facility in 1987 and expects to produce 200,000 pounds U_3O_8 per year by 1990.

Intercontinental Energy Corp. (IEC) increased production at its Lamprecht facility to almost 100,000 pounds in 1987.

In December 1987, Greenwood Holdings, Inc. (GHI) purchased IEC, distributing all of IEC's oil-related assets and liabilities to GHI, leaving IEC with only uranium-related interests. Following that move, a newly-formed IEC Employee Stock Ownership Trust and a group of US and European investors purchased all of IEC's outstanding capital stock; the investment group received 49 percent of the

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Table 3

CURRENT STATUS OF SOLUTION MINING PROJECTS IN THE USA

Location	Company	Mine Site	Current Status
Nebraska	Ferret Exploration Co.	Crow Butte	Permitting
		Big Red	Exploring
New Mexico	Mobil Oil Corp.	Crown Point	Undeveloped
	Uranium Resources, Inc.	Church Rock	Permitting
Texas	Caithness Mining Corp.	McBride	Restored
	Chevron	Palangana	In Restoration
	Conoco, Inc.	Trevino	Restored
	Everest Exploration, Inc.	Hobson-1	Restored
		Hobson Tex-1	Operating
		Las Palmas	In Restoration
		Mt. Lucas	In Restoration
		Gruy-7B	Permitting
	Intercontinental Energy Corp.	Pawnee	In Restoration
		Zamzow	In Restoration
		Lamprecht	Operating
	Malapai Resources Co.	El Mesquite	Operating
		Holiday	Operating
		O'Hern	Operating
	Total Energy Resources	West Cole	Operating
	USX, Inc.	Boots/Brown	In Restoration
		Burns/Moser	In Restoration
		Clay West	In Restoration
		Pawlik	In Restoration
	Uranium Resources, Inc.	Benavides	In Restoration
		Kingsville Dome	Under Development
		Longoria	Restored
		Rosita	Permitting
	Westinghouse Electric Corp.	Bruni	In Restoration
Wyoming	Malapai Resources Co.	Irigaray	Operating
		Christensen Ranch	Permitting
	Everest Minerals Corp.	Highland	Under Development
	Sequoyah Fuels Corp.	Bill Smith	Pilot Plant Operating
	Ogle Petroleum Corp.	Bison Basin	In Restoration[1]
	Uranerz USA	Ruth	Undeveloped
	CEB Co.	Leuenberger	Undeveloped

[1]Being restored by Altair Resources after default by Ogle.

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stock and the right to appoint a majority of the Board of Directors. The Board consists of Mr. Leland O. Erdahl, Mr. Leo Rostermundt, and the CEO of GHI, who is Mr. Robert A. Fillingham. IEC's uranium operations will be managed by Mr. Erdahl.

Wyoming and Nebraska — **Everest Minerals** expects to begin production at its Highland, Wyoming project in January 1988, at the rate of 800,000 pounds U_3O_8 per year. **Malapai Resources** acquired the Irigary, Wyoming project from Westinghouse, and restarted the plant in late 1987. Malapai forecasts 1988 production from Irigary at 250,000 pounds U_3O_8. Malapai also has plans to start production at its Christensen Ranch, Wyoming property in 1989.

In the longer term, **Ferret Exploration Company's** Crow Butte, Nebraska project is expected to be capable of producing 1,000,000 pounds per year in the early 1990s. Ferret has submitted an application for full commercial production, and initial production at a rate of 500,000 pounds U_3O_8 per year is expected in 1989.

By-Product Production

By-product uranium production in the USA is dominated by **International Minerals and Chemical Corp.** (IMC) and **Freeport Uranium Recovery Company**, which produce about 1,900,000 and 1,200,000 pounds per year, respectively. Both producers extract uranium from phosphoric acid, derived from the processing of phosphate rock. Additional capacity for the production of U_3O_8 from phosphoric acid is available, but currently is on standby due to lack of demand for phosphoric acid. Uranium producing phosphoric acid production facilities are summarized in Table 4.

By-product uranium also has been produced in the USA from coal, copper, beryllium and rare earth recovery facilities. Currently, **Rhone Poulenc** recovers about 30,000 pounds U_3O_8 per year from the processing of rare earth oxides at its plant in Freeport, Texas, and **Energy Fuels** produces U_3O_8 as a by-product of copper at its plant at Bingham Canyon, Utah. The Energy Fuels' operation extracts about 10,000 pounds U_3O_8 per month. **Brush Wellman, Inc.**, which produced a few thousand pounds per year from its beryllium operation in Utah, decommissioned its uranium production circuit in 1987. The uranium from copper processing facility at Anamax's inactive Twin Buttes mine was sold to **Cyprus Minerals**, which operates the nearby Bagdad copper mine. Cyprus has not announced any plans to install or operate that facility.

Several mines in the Grants, New Mexico district produce by-product uranium by treating the mine water pumped from uranium mines. **Homestake Mining Co.** and **Quivira Mining Co.** currently recover a total of about 400,000 pounds U_3O_8 per year from mine waters in conventional underground mines, most of which are no longer in operation.

CORRECTION

Nuexco's December 1987 article entitled "Radiometric Ore Sorting" contained two errors. The article states: "Overall, sandstone ores, which comprise over 90 percent of the world's uranium resources, are not particularly suitable for sorting."

In fact, sandstone ores comprise less than 40 percent of WOCA "Reasonably Assured Resources" (RAR) at a cost of less than $130/kgU according to *Uranium: Resources, Production and Demand* by the OECD Nuclear Energy Agency and the International Atomic Energy Agency (1986).

Only detailed testwork can provide the information necessary to make an informed judgment of the economics of sorting any ore. Friable, poorly-cemented sandstone ores, such as those found in the Wyoming Basins in the USA, are not particularly suitable for sorting. However, well-cemented sediments, which are more likely to occur in older formations, such as the Permian Karoo of South Africa, and the Permian and Triassic sediments of the western USA, are more likely to be suitable for sorting. For example, the Lodeve project in France uses a sorter to process a Permian sediment, although the sorter was not part of the original plant.

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Table 4

URANIUM BY-PRODUCT FROM PHOSPHORIC ACID PRODUCTION
(Millions of Pounds U_3O_8)

Production Facility	Phosphoric Acid Producer	Uranium Producer	Capacity lbs U_3O_8/yr	Current Status	Comments
New Wales, FL	IMC	IMC	1,200,000	Operating	Opened in 1980
Plant City, FL	CF Industries	IMC	700,000	Operating	Opened in 1980
Bartow, FL	CF Industries	IMC	500,000	Standby	Closed in July 1985
Uncle Sam, LA	Freeport	Freeport	800,000	Operating	Opened in 1978
Donaldsonville, LA	Agrico Chem. Co.	Freeport	450,000	Operating	Opened in 1981
Bartow, FL	Farmland Industries, Inc.	UG USA, Inc.	400,000	Standby	Purchased from Westinghouse in 1985. Last operated in Sept. 1981.
Tampa, FL	Gardinier, Inc.	Gardinier, Inc.	425,000	Mothballed	Closed in March 1982
Mulberry, FL	W. R. Grace & Co.	UNC Resources, Inc.	300,000	Renovation*	Closed in 1980.
Calgary, Alberta	Western Coop. Fertilizers, Ltd.	Earth Sciences Inc.	120,000	Standby	Closed in August 1987
TOTAL			4,895,000		

*Currently being renovated to treat industrial waste for the recovery of strategic metals, including uranium.

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RECENT DEVELOPMENTS

UNITED STATES

EIA Releases Annual Viability Assessment

The US Energy Information Administration (EIA — an independent statistical and analytical agency within the US Department of Energy) has released its annual report entitled "Domestic Uranium Mining and Milling Industry: 1986 Viability Assessment." The purpose of the EIA study is to provide the Secretary of Energy with the information needed to make an annual determination of the industry's viability, as required under a 1983 amendment to the Atomic Energy Act of 1954. Although the Secretary of Energy has not yet issued his determination for 1986, the 1986 assessment indicated that the industry had not recovered significantly from the previous year (in which it was deemed non-viable) despite somewhat increased production.

The first annual determination of industry viability took place in 1984 for the calendar year 1983; Secretary of Energy Hodel found that the domestic uranium mining and milling industry was viable for that year. For the following year, 1984, Secretary Herrington determined that the industry was not viable, and announced that he would undertake three steps designed to aid the domestic industry:

1. The Secretary authorized DOE to offer a free variable tails assay option (VTAO) each year to customers willing to commit to buy 100 percent of their requirements from DOE over a rolling five-year period.

2. He postponed a DOE plan to enrich some feed taken from its own uranium stockpile. As this item also was sought in Count IV of the US uranium producers' lawsuit against DOE, the Department later announced that it would not implement the plan at all.

3. Herrington also asked the US Trade Representative to examine the foreign trade and policy issues concerning uranium imports so that DOE could determine the appropriate courses of action under US trade laws. Trade Representative Clayton Yeutter then recommended that no action be taken, basing his recommendation on the conclusions of an interagency task force that import restrictions would bring at best only short-term relief to the US industry, and would be likely to antagonize US trading partners.

Viability Assessment Criteria

The Secretary of Energy is required to monitor and annually to determine the viability of the US uranium industry. A 1983 rulemaking set forth several criteria to be considered in determining the industry's viability, and the EIA's viability study provides data and information that measure the industry's capability. The criteria define four major "attributes of viability:"

1. Resource Capability — Whether domestic economic uranium reserves can supply all domestic needs for a future ten-year period.

2. Supply Response Capability — The level of domestic uranium production capacity sufficient to meet projected domestic nuclear power needs for a ten-year period.

3. Financial Capability — The ability of the domestic uranium industry to obtain funds adequate to finance the level of production capability defined under supply response capability.

4. Import Commitment Dependency — Whether executed contracts or options for (natural or enriched uranium) will result in greater than 37.5 percent of actual or projected domestic uranium requirements being supplied by (uranium from) foreign sources for any period of two consecutive years.

The EIA assessment both provides information for the year under consideration and makes projections of future conditions of each of the four fundamental attributes as well as some related ones, such as a projection of industry status under both supply disruptions and free market conditions. Some of the more important and interesting data and conclusions are summarized below.

Current Status of the Industry

The latest viability report has concluded that almost all of the short-term indicators of the US uranium industry's health are weak, although several appear to have strengthened somewhat since 1985, when the Secretary found that the industry was not viable.

1. US uranium production in 1986 totaled 13.5 million pounds U_3O_8, up 19 percent from the 1985 level of 11.3 million pounds, which was the lowest since 1956. The number of sources contributing to production has dropped from 50 in 1984, to 41 in 1985, to 35 in 1986.

2. During the years 1983 to 1986, the domestic uranium industry lost a total of $766 million, including a 1985 total of $419 million. In 1986, the industry's net deficit improved, to $42 million. However, total industry assets, including both current and non-current assets as well as property, plant and equipment (PP&E) have declined steadily, dropping from approximately $3,558 million in 1982 to approximately $1,771 million in 1986 (Figures 1 and 2).

3. Exploration expenditures in 1986 increased slightly to $22.1 million, after having fallen from $27.4 million in 1984 to $20.6 million in 1985. Drilling activity, the primary indicator of exploration effort, increased from 1.8

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Figure 1
US Uranium Industry Income

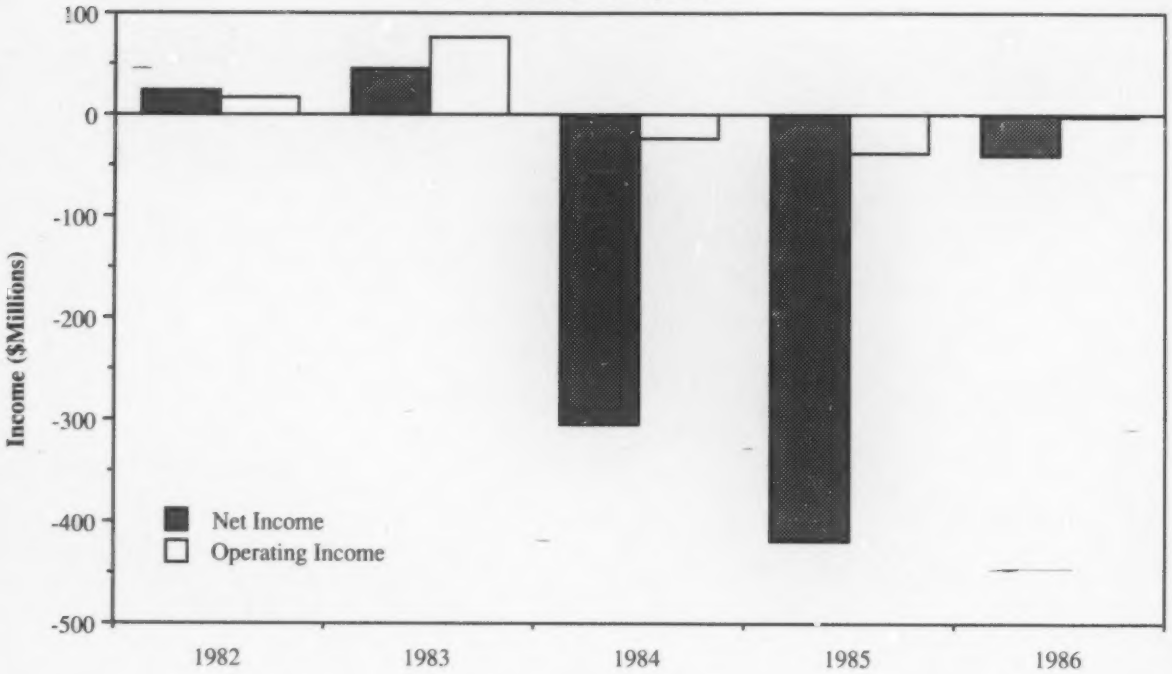
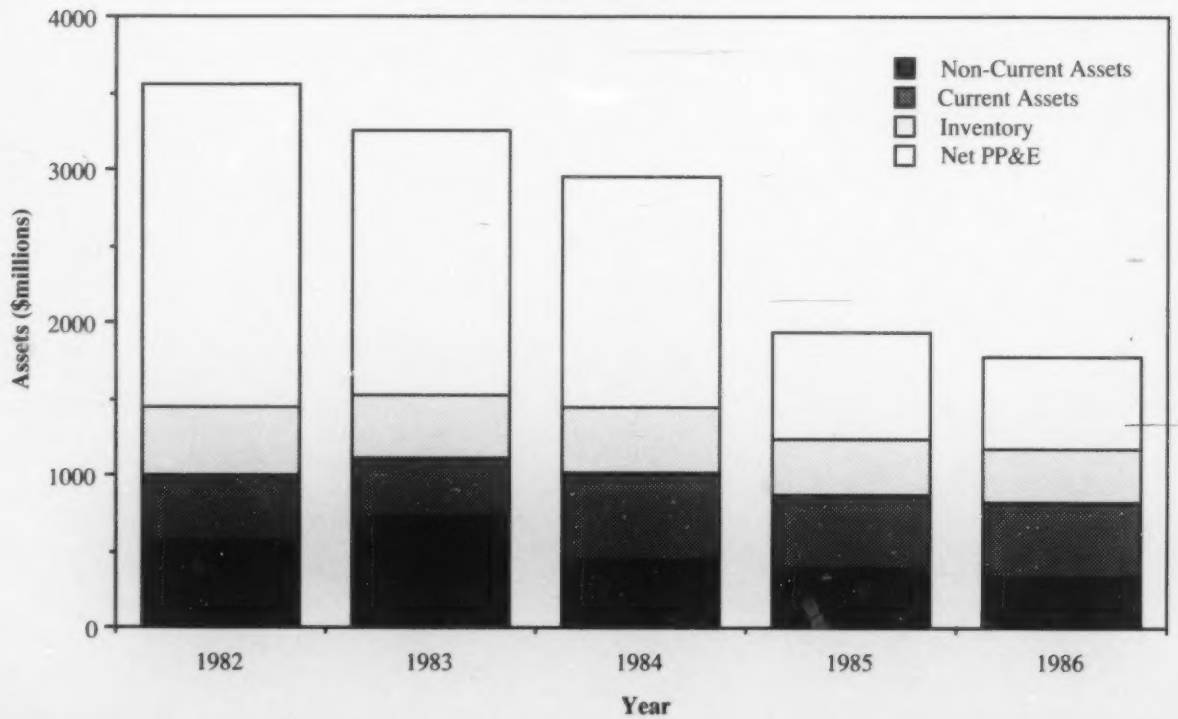


Figure 2
US Uranium Industry Assets



million feet in 1985 to 2.1 million feet in 1986.

4. Overall uranium industry employment in 1986 dropped to a low of 2,100 person-years, a 13-percent decline from 1985 and a 77-percent decline from 1982. Employment specifically in uranium mining was about 22-percent lower than in 1985, while employment in milling remained approximately the same as the previous year.

5. The production costs of most US uranium producers remain above recent contract prices.

Import Commitment Dependency

For 1986, the EIA study showed that the US utilities as a group used somewhat more imported uranium as a percentage of their requirements than in most previous years. Imports accounted for about 44 percent of domestic utility requirements in 1986. Imports represented 52 percent of US requirements in 1982, 26 percent in 1983, 39 percent in 1984, and 34 percent in 1985.

Import commitment dependency that results in imports totaling more than than 37.5 percent of US requirements for two consecutive years is one of the criteria used to assess viability. It should be noted, however, that this indicator tends to fluctuate widely from year to year depending on contract volume, making it difficult to discern any real trends from these figures. According to the study's projections for future years, "annual imports of natural and enriched uranium for the reference case are about 30 percent of requirements in 1987, increase to above 50 percent in 1991, and reach a peak of about 64 percent in 1998."

Disruption Scenarios and Supply Response Capability

In its assessment, the EIA study uses hypothetical supply disruption scenarios to estimate the US industry's ability to respond over the next ten years to a one-third disruption of uranium import contracts now in place. In other words, if one-third of the non-US uranium supply currently under contract became unavailable for delivery, would the US uranium industry be able to produce enough to compensate for the decrease in non-US uranium imports? The study examined the US industry's resource capability, financial capability, and ability to meet the supply security requirements of US utilities, and concluded the following:

1. As with the previous year's study, even with a one-third disruption of foreign supplies, "the amounts of domestic-origin uranium reported by suppliers as likely to be available over the next 10 years indicate that the uranium industry could fill domestic uranium supply security requirements. . ."

2. DOE estimates of reasonably assured resources in the USA support the above conclusion.

3. However, in the study's 1991 through 2000 scenario, the industry's projected domestic capacity falls slightly below the annual security requirements in the reference case; the study notes that the shortfall could be met through increased inventory drawdowns.

4. For the short-term disruption scenarios, mining and milling capacity that already exists, either in operation or standby, can meet or come close to meeting uranium requirements through reactivation and increased utilization. However, increasing production during a disruption period would likely require higher prices.

Conclusion

The 1986 EIA Viability Assessment portrays the US uranium industry as similar in overall condition to the previous year, when it was found to be non-viable. 1986 production increased over 1985, and the level of net operating losses was not as great as in 1985. However, employment and industry assets continued to drop, and the number of firms and their capital investments were at their lowest level since 1973. The level of imports as a percentage of US utility requirements was 34 and 44 percent in 1985 and 1986, respectively, and EIA projections of import levels in the 1990s show a steady rise in imports, to a peak of 64 percent in 1996.

* * *

Herrington Declares US Uranium Industry Non-Viable in 1986

Following the publication of the EIA study, Secretary Herrington declared the US uranium industry non-viable for calendar year 1986. This finding makes the third consecutive year that the industry has been deemed non-viable.

In his rationale for the decision, Secretary Herrington reiterated the findings of the EIA study, noting in particular that the "technical capability of the industry is dependent upon the ability of the industry to generate funds. Thus, the supply response capability must be reviewed in conjunction with the financial capability of the industry." He went on to state that "to maintain an adequate supply response capability in the future, capital expenditures higher than those projected without an import disruption would be necessary. The potential to raise the required investment funds would be dependent upon higher revenues and expectations of profitability. Neither higher revenues nor improved profitability are expected for the uranium industry in the next several years."

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CANADA

Changes to Uranium Project Ownership Policy Announced

On December 23, 1987, the Canadian Government announced changes in its policy toward foreign ownership of uranium projects. The old policy generally limited non-Canadian ownership of uranium projects to 33 percent; the change allows foreign participation to reach a level of 49 percent of an individual uranium property when it comes into production. A press release from the office of the Hon. Gerald S. Merrithew, Minister of State (Forestry and Mines) further stated that "In cases in which a project is controlled by Canadians, a reduction from the 51 per cent minimum Canadian participation level may be permitted, allowing Canadians more flexibility in raising capital for projects as long as they maintain controlling interest."

In the first act under the new policy, Minister Merrithew approved a transaction by which Korea Electric Power Corporation (KEPCO) bought a two-percent non-voting participating equity interest from the Saskatchewan Mining Development Corp. (SMDC) in the Cigar Lake joint venture in Saskatchewan. Part of the sale includes a long-term uranium supply contract to KEPCO. The contract is for delivery of U_3O_8 over the period 1993 to 2002, with provisions for a ten-year extension. The Minister's office estimates the total value of the contract at about $150 million at current Canadian export prices. The Cigar Lake joint venture is being developed by a consortium consisting of SMDC, Cogema Canada Ltd., Corona Grande Exploration Corp. (wholly-owned by Cogema) and Idemitsu Uranium Exploration Canada Ltd. (Table 5), and is expected to begin production in the mid-1990s.

The new policy is part of an increasing emphasis on Canada's part to encourage investment in its uranium mining industry. The bulk of any increased investment in uranium production is likely to take place in Saskatchewan, and boosting that province's economic development clearly is one of the reasons behind the shift in policy.

Before the KEPCO deal, the Cigar Lake project was owned 50.75 percent by SMDC, 36.375 percent by Cogema Canada Ltd., and 12.875 percent by Idemitsu Canada. This ownership structure had been approved under the earlier policy, even though the Canadian interest was less than the two-thirds normally required, because SMDC retained a controlling interest. KEPCO's non-voting equity reduces SMDC's share to 48.75 percent, but allows the Canadian firm to retain control.

Table 5

NEW OWNERSHIP OF CIGAR LAKE JOINT VENTURE

Company	Percent Ownership
SMDC[1]	48.75
Cogema Canada Ltd.	36.625
Corona Grande Exploration Corp.[2]	3.75
Idemitsu Uranium Exploration Canada Ltd.	12.875
KEPCO[3]	2.00

[1]SMDC = Saskatchewan Mining Development Corporation.
[2]A wholly-owned subsidiary of Cogema Canada Ltd.
[3]KEPCO = Korea Electric Power Company. This is a non-voting interest.

Clearly, the change in government policy will most affect projects under development, or to be developed, and primarily in Saskatchewan, at least for the foreseeable future. It is possible that other uranium consumers may consider (or reconsider) the benefits of equity participation, particularly in identified low-risk projects. For project owners, the change in policy presents an opportunity to attract additional capital and secure long-term customers, resulting in an improved production and marketing situation.

Since 1981, non-Canadian companies have maintained a relative share of exploration expenditures in Canada of about 55 percent. However, the US companies' portion has dropped from about 28 percent in 1981 to less than two percent today, and participation by non-US companies has risen proportionately. Most of the US companies were affiliated with major oil companies, while most of the other non-Canadian firms participating in exploration are affiliated with or sponsored by utilities or governments. With the opportunity to obtain more equity in Canadian uranium developments, there could be even greater incentive now to increase exploration efforts.

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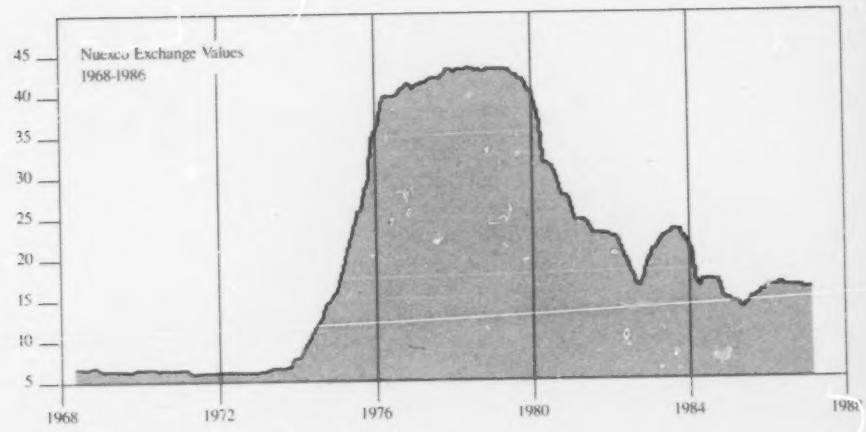
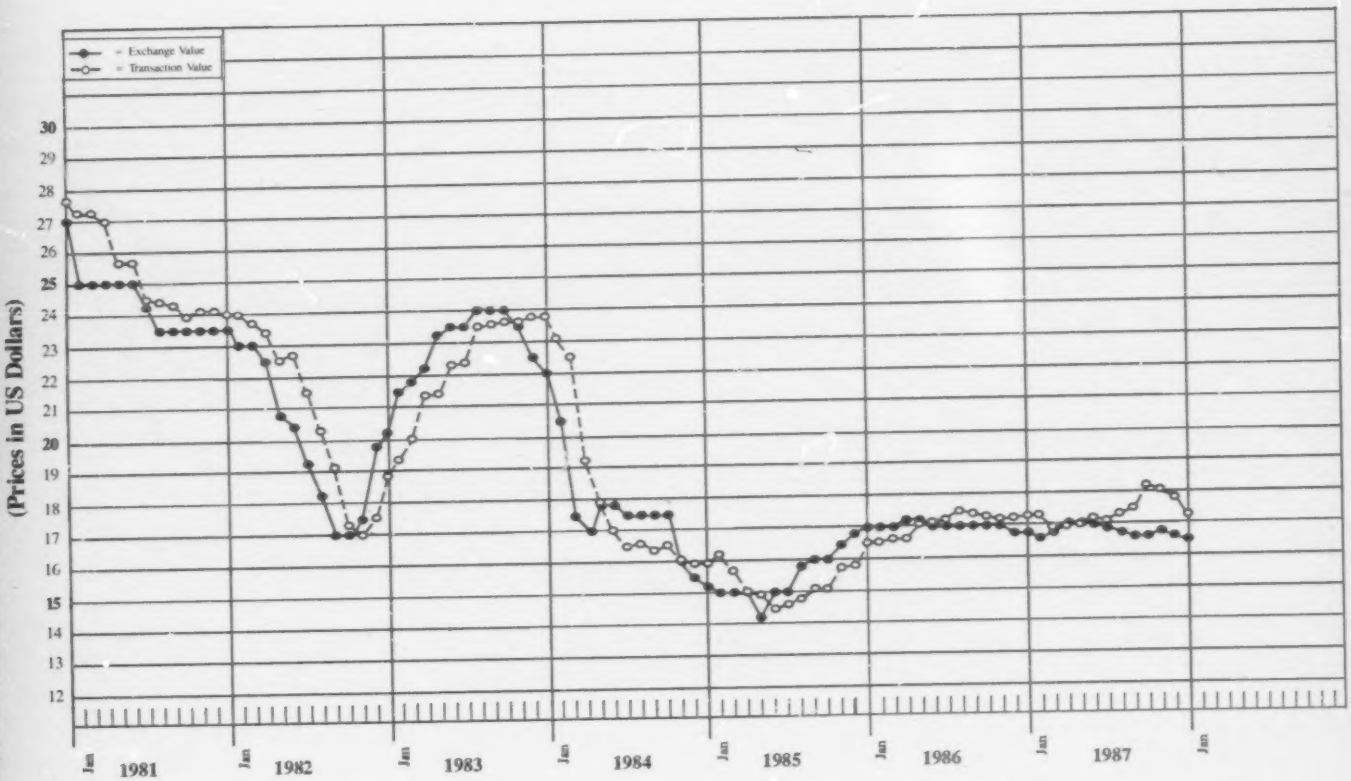
HISTORICAL MARKET DATA





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HISTORICAL EXCHANGE VALUES

Determined as of the last day of the month indicated (US Dollars/lb. U_3O_8)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1968	—	—	—	—	—	—	—	6.35	6.35	6.40	6.45	6.50
1969		6.35	6.10	6.10	6.25	6.25	6.20	6.20	6.15	6.15	6.15	6.20
1970	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.20	6.15	6.15	6.15	6.15
1971	6.20	6.20	6.20	6.20	6.15	6.05	6.00	5.95	5.95	5.95	5.95	5.95
1972	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95
1973	5.95	6.00	6.10	6.20	6.45	6.50	6.50	6.50	6.50	6.50	6.75	7.00
1974	7.70	7.90	8.00	9.00	9.50	10.50	11.50	12.00	12.50	14.00	14.75	15.00
1975	16.00	16.00	18.00	20.00	21.00	23.00	24.70	26.00	26.00	28.50	30.00	35.00
1976	35.20	37.00	39.25	40.00	40.00	40.00	40.00	40.40	41.00	41.00	41.50	41.00
1977	41.35	41.50	41.60	41.60	42.00	42.25	42.25	42.25	42.40	42.75	43.20	43.20
1978	42.90	43.25	43.25	43.25	43.40	43.40	43.40	43.10	43.25	43.00	43.25	43.25
1979	43.25	43.25	43.25	43.25	43.25	43.00	42.70	42.70	42.20	42.20	41.00	40.75
1980	40.00	38.00	35.00	32.00	32.00	31.50	31.50	30.00	28.50	28.00	28.00	27.00
1981	25.00	25.00	25.00	25.00	25.00	24.25	23.50	23.50	23.50	23.50	23.50	23.50
1982	23.00	23.00	22.50	20.75	20.50	19.25	18.25	17.00	17.00	17.50	19.75	20.25
1983	21.50	21.75	22.25	23.25	23.50	23.50	24.00	24.00	24.00	23.50	22.50	22.00
1984	20.50	17.50	17.00	17.75	17.75	17.50	17.50	17.50	17.50	16.00	15.50	15.25
1985	15.00	15.00	15.00	14.25	15.00	15.00	15.75	16.00	16.00	16.50	16.75	17.00
1986	17.00	17.00	17.25	17.25	17.00	17.00	17.00	17.00	17.00	17.00	16.75	16.75
1987	16.65	16.75	17.00	17.00	17.00	16.90	16.75	16.65	16.65	16.75	16.65	**16.55**

HISTORICAL TRANSACTION VALUES

Determined as of the last day of the month indicated (US Dollars/lb. U_3O_8)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1976	—	—	—	—	39.60	39.70	39.70	40.40	40.30	40.60	40.70	40.70
1977	41.30	41.30	41.40	41.50	42.80	42.90	43.00	42.60	42.50	42.80	42.90	42.90
1978	43.10	43.30	43.70	43.60	43.60	43.20	43.30	43.40	43.40	43.60	43.40	43.70
1979	43.60	43.80	43.70	43.40	43.60	43.70	43.70	43.60	43.60	43.60	43.50	42.30
1980	42.00	39.30	38.60	38.40	37.90	37.60	37.30	31.30	30.60	29.00	28.70	27.70
1981	27.20	27.20	27.00	25.70	25.70	24.50	24.40	24.30	23.90	24.10	24.10	24.00
1982	24.00	23.70	23.40	22.60	22.70	21.50	20.30	19.10	17.30	17.00	17.55	18.80
1983	19.35	20.00	21.35	21.40	22.35	22.45	23.50	23.60	23.65	23.65	23.85	23.85
1984	23.05	22.50	19.25	17.90	17.00	16.50	16.60	16.40	16.55	16.05	15.90	15.90
1985	16.20	15.70	15.05	14.90	14.45	14.60	14.75	15.10	15.10	15.75	15.80	16.55
1986	16.55	16.70	16.70	17.10	17.05	17.20	17.50	17.45	17.35	17.25	17.30	17.35
1987	17.35	16.90	16.95	17.00	17.20	17.10	17.30	17.55	18.20	18.05	17.80	**17.20**

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HISTORICAL MARKET DATA

HISTORICAL CONVERSION VALUES

Determined as of the last day of the month indicated (US Dollars/lb. U in UF_6)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981	1.20	1.20	1.20	1.40	1.15	1.15	1.15	1.10	1.10	1.10	1.20	1.20
1982	1.20	1.20	1.20	1.20	1.00	1.00	1.00	0.90	1.10	1.60	1.45	1.45
1983	1.20	1.40	1.40	1.20	1.20	1.20	1.10	1.10	1.00	0.60	0.60	0.60
1984	0.60	0.30	0.80	0.80	0.80	0.00	0.00	0.80	1.00	1.00	0.80	0.80
1985	1.00	1.00	1.00	1.50	1.50	1.60	1.60	1.60	1.60	1.60	1.60	1.60
1986	1.60	1.80	1.90	1.80	1.80	1.80	1.80	1.90	1.90	1.90	1.80	1.80
1987	1.80	1.80	1.80	1.80	1.80	1.80	1.90	1.90	1.90	1.90	1.90	**1.90**

HISTORICAL UF_6 VALUES

Determined as of the last day of the month indicated (US Dollars/kg. U in UF_6)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1985	—	—	—	40.50	42.50	42.50	44.00	44.50	44.50	46.00	46.00	47.00
1986	47.00	48.00	48.00	48.50	48.25	48.25	48.25	48.00	48.00	48.00	48.00	47.75
1987	47.75	48.00	48.00	48.00	47.75	47.75	47.50	47.00	46.75	47.00	47.00	**47.00**

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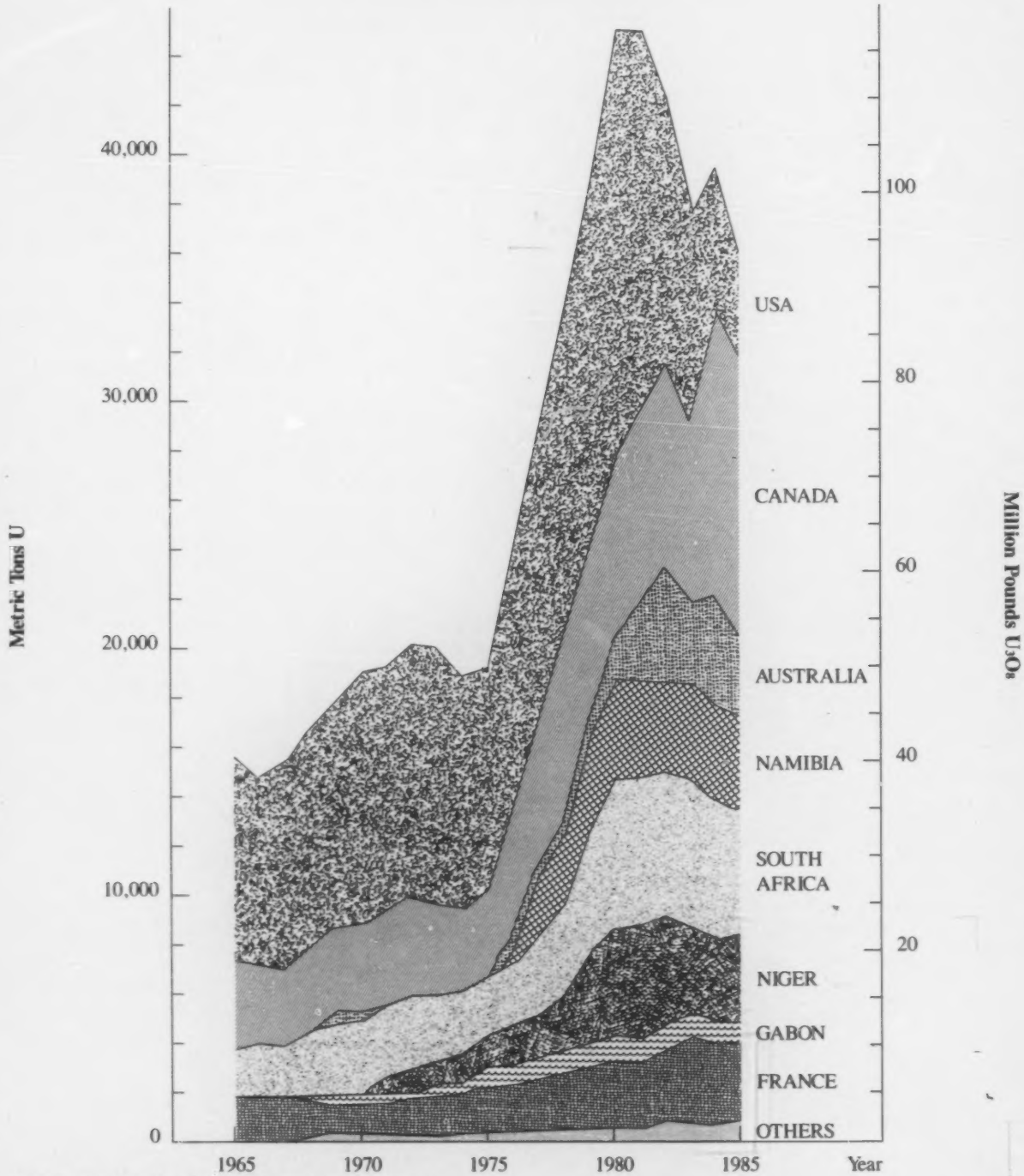
HISTORICAL WOCA[1] URANIUM PRODUCTION[2]
(Compiled by OECD/IAEA Joint Report[3])



[1]WOCA = World Outside of Centrally-planned Economic Areas.

[2]1985 production data are preliminary.

[3]A joint report issued biennially by the OECD Nuclear Energy Agency and the International Atomic Energy Agency.

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HISTORICAL MARKET DATA

US URANIUM MARKETING ACTIVITIES STATISTICS[1]
(Compiled from data published by the US Energy Information Administration)

Year	Total Production[2] (million pounds U_3O_8)	Deliveries to Domestic Utilities[3] (million pounds U_3O_8)	Average Price of Delivered Uranium ($/lb. U_3O_8)	Quantity of Uranium Imported[4] (million pounds U_3O_8)	Average Price of Imported Uranium ($/lb. U_3O_8)	Quantity of Uranium Exported (million pounds U_3O_8)
1976	25.5	n/a	n/a	3.6	n/a	1.2
1977	29.9	n/a	n/a	5.6	n/a	4.0
1978	37.0	n/a	n/a	5.2	n/a	6.8
1979	37.5	33.0[5]	$23.85[5]	3.0	n/a	6.2
1980	43.7	35.0[5]	$28.15[5]	3.6	$43.10	5.8
1981	38.5	32.6[5]	$34.65[5]	6.6	$32.90	4.4
1982	26.9	27.1	$38.37	17.1	$27.23[6]	6.2
1983	21.2	24.2	$38.21	8.2	$26.16	3.3
1984	14.9	22.5	$32.65	12.5	$21.86	2.2
1985	11.3	21.7	$31.43	11.7	$20.08	5.3
1986	13.5	18.9	$30.01	13.5	$20.07	1.6

[1]Sources: 1979: US Department of Energy, Assistant Secretary for Resource Applications, Office of Uranium Rresources and Enrichment, *Survey of United States Uranium Marketing Activity*, DOE/RA-0053 (Washington DC, July 1980). 1980-1981: US Department of Energy, ASsistant Secretary for Nuclear Energy, Office of Uranium Enrichment and Assessment, *Survey of United States Marketing Activity*, DOE/NE-0013 and DOE/NE-0013/1 (Washington DC, June 1981 and July 1982). 1982: Energy Information Administration, *1982 Survey of United States Marketing Activity*, DOE/EIA-0403 (Washington DC, September 1983). 1983: Energy Information Administration, *Survey of United States Marketing Activity 1983*, DOE/EIA-0403(83) (Washington DC, August 1984). 1984: Energy Information Administration, Form EIA-858, "Uranium Industry Annual Survey" (1984). 1985: Energy Information Administration, Form EIA-858, "Uranium Industry Annual Survey" (1985).

[2]Sources: 1976-11982: US Department of Energy, Grand Junction Area Office, *Statistical Data of the Uranium Industry*, GJO-100 (Grand Junction, Colorado, January 1983). 1983: Calculated by the staff of the Nuclear and Alternate Fuels Division, Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration, from US Department of Energy, Grand Junction Area Office data files. 1984: Energy Information Administration, Form EIA-858, "Uranium Industry Annual Survey" (1984). 1985: Energy Information Administration, Form EIA-858, "Uranium Industry Annual Survey" (1985).

[3]Excludes direct imports by domestic utilities.

[4]Includes imports by domestic utilities and domestic suppliers.

[5]Includes delivery commitments to domestic utilities and agents.

[6]Computation of quantity-weighted average price excludes the quantity associated with a large exchange (swap) transaction that occurred in 1982.

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VOLUME AND PRICE OF URANIUM DELIVERIES TO THE EUROPEAN COMMUNITY[1]
(Compiled from data published by the Euratom Supply Agency)

Year	Volume of Deliveries to the EC[2] (in MTU)	Percentage of Deliveries Made Under Spot Contracts	Medium or Long-Term Contracts[3,4]		Spot Contracts[3,4]	
			Average Price in ECU per pound U_3O_8	Average Price in US Dollars per pound U_3O_8	Average Price in ECU per pound U_3O_8	Average Price in US Dollars per pound U_3O_8
1977	n/a	n/a	n/a	n/a	n/a	$41.00
1978	n/a	n/a	n/a	n/a	n/a	$43.00
1979	10,000	n/a	n/a	n/a	n/a	$44.50
1980	8,600	n/a	n/a	$36.00	n/a	$35.00
1981	13,000	less than 10	n/a	$33.25	n/a	$28.00
1982	12,500	less than 10	ECU 32.25	$32.00	ECU 24.25	$24.00
1983	13,500	less than 10	ECU 34.75	$31.00	ECU 26.00	$23.25
1984	11,000	less than 10	ECU 37.75	$29.75	ECU 24.50	$19.25
1985	11,000	11.5	ECU 38.00	$29.00	ECU 19.50	$15.00
1986	12,000	9.5	ECU 31.50	$31.00	ECU 18.00	$17.75

[1]The twelve European Community member nations are Belgium, Denmark, France, the Federal Republic of Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom; prior to January 1986, Spain and Portugal were not members of the EEC.

[2]The only deliveries taken into account are those made to final users, namely the electric utilities or their procurement organizations; deliveries to middlemen or fuel cycle companies are not included. The sales between utilities in the Community are also excluded. The quantities covered are those which were entered into accounting records during the year stated.

[3]For deliveries made under medium or long-term contracts (i.e., for which the time between the date of signature and the date of the last delivery exceeds one year) the prices were expressed in seven different currencies. In order to calculate an average price, these prices have been converted into European Currency Units (ECU) and US dollars. The average prices were weighted by quantity and converted on the basis of the average annual exchange rate of the different currencies against the ECU and US dollar.

[4]Exchange rates are published by European Communities Statistical Office and the International Monetary Fund.

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GOVERNMENT STATISTICS

AUSTRALIA

		Consumer Price Index[1] (1980/1981 = 100)	Price Index of Materials Used in Manufacturing Industry — All Groups[2] (1984/1985 = 100)	Award Rates of Pay Indexes Australia - Adult Males In Mining Wage Earners, Weekly Rates[3] (June 1976=100)
1975	Avg.[4]	57.9	36.3	82.1
1976	Avg.	65.7	40.7	99.7
1977	Avg.	73.8	46.3	110.8
1978	Avg.	79.7	52.0	117.7
1979	Avg.	86.9	69.5	127.9
1980	Avg.	95.8	83.1	140.8
1981	Avg.	105.0	85.9	154.1
1982	Avg.	116.7	89.0	174.9
1983	Avg.	128.5	96.9	181.9
1984	Avg.	133.6	98.0	194.4
1985	Avg.	142.6	107.3	202.7
1986	Avg.	155.5	101.5	213.0
Jan	1986	—	109.5	210.5
Feb	1986	—	108.7	210.5
Mar	1986	150.5	99.4	210.5
Apr	1986	—	94.2	210.5
May	1986	—	93.5	210.5
Jun	1986	153.0	95.6	210.5
Jul	1986	—	97.8	215.3
Aug	1986	—	97.9	215.3
Sep	1986	157.0	105.4	215.3
Oct	1986	—	105.9	215.5
Nov	1986	—	104.9	215.7
Dec	1986	161.5	105.2	215.6
Jan	1987	—	106.2	215.9
Feb	1987	—	108.9	216.5
Mar	1987	164.7	108.4	222.2
Apr	1987	—	108.3	222.2
May	1987	—	108.1	222.0
June	1987	167.2	108.1	221.8
July	1987	—	108.7	221.1
Aug	1987	—	110.5	222.3
Sep	1987	170.0	109.3	223.1

P = Preliminary R = Revised since last month

[1]Weighted average of six State capital cities (1975 to 1980), and eight capital cities from 1981 (Base: Financial year July 1980 to June 1981 =100.0). Figures shown at end of quarter represent quarterly average.

[2]Australian Bureau of Statistics, Canberra: "Price Index of Materials Used in Manufacturing Industry" (Catalogue No. 6411.0).

[3]Australian Bureau of Statistics, Canberra: "Award Rates of Pay Indexes, Australia" (Catalogue No. 6312.0). Figures for the latest fourteen months shown are subject to revision.

[4]Monthly data for 1967 to 1986 appear in Report 233.

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CANADA

				Wage-earner Data: Average Hourly Earnings (C$)[2]				
		Industrial Products Price Index: All Commodities[1] (1981 = 100)	Consumer Price Index: All Items (1981 = 100)	Uranium Mines (SIC 057)	Metal Mines (SIC 051-059)	Mines, Quarries and Oil Wells[3] (SIC 051-099)	Metal Rolling, Casting and Extruding (SIC 298)	Chemicals and Chemical Products Industries (SIC 372-379)
1979	Avg.	80.0	80.7	—	—	—	—	—
1980	Avg.	90.7	88.9	—	—	—	—	—
1981	Avg.	100.0	100.0	—	—	—	—	—
1982	Avg.	106.7	110.8	—	—	—	—	—
1983	Avg.	110.4	117.2	17.22	—	14.18	10.67	11.10
1984	Avg.	115.4	122.3	17.89	—	14.97	11.11	11.68
1985	Avg.	118.6	127.2	18.53	16.48	15.56	11.85	12.12
1986	Avg.	119.6	132.4	19.38	16.70	15.76	12.28	12.58
Jan	1986	121.0	130.1	18.16	16.32	15.75	12.16	12.43
Feb	1986	120.8	130.6	19.53	16.67	15.88	12.27	12.36
Mar	1986	120.1	130.9	19.05	16.75	15.82	12.27	12.45
Apr	1986	119.3	131.1	19.39	16.79	15.84	12.33	12.45
May	1986	118.4	131.7	19.55	16.79	15.67	12.41	12.42
Jun	1986	118.6	131.9	19.81	16.73	15.53	12.56	12.40
Jul	1986	118.8	132.9	19.52	16.44	15.37	12.42	12.43
Aug	1986	119.1	133.3	18.40	16.27	15.35	11.98	12.61
Sep	1986	119.4	133.4	19.33	16.72	15.67	12.12	12.81
Oct	1986	119.9	134.0	19.98	16.92	16.00	12.27	12.85
Nov	1986	119.9	134.7	20.12	17.12	16.13	12.35	12.84
Dec	1986	119.7	134.9	19.68	16.90	16.08	12.25	12.90
Jan	1987	120.0	135.2	19.53	16.93	16.03	12.58	12.89
Feb	1987	119.8	135.8	20.33	17.20	16.21	12.66	13.11
Mar	1986	120.4	136.4	20.04	17.14	16.15	12.58	13.02
Apr	1987	121.2	137.0	20.47	17.38	16.26	11.99	13.27
May	1987	122.0	137.8	20.50	17.12	15.96	11.44	13.19
June	1987	122.5	138.2	20.23	16.94	15.70	12.77	12.88
July	1987	123.1	139.2	19.75	16.73	15.63	12.52	12.98
Aug	1987	123.7	139.3	19.64	16.98	15.87	12.65	13.03
Sep	1987	124.0	139.3	19.85R	17.20R	16.25R	12.57R	13.40R
Oct	1987	124.3	139.8	20.06P	17.36P	16.32P	12.96P	13.41P
Nov	1987	—	140.4	—	—	—	—	—

P = Preliminary R = Revised since last month

[1]Statistics Canada, Prices Division, Ottawa: "Industry Price Indexes" (Catalogue 62-011). Indexes for the most recent six months shown are subject to revision. This category was formerly known as "Manufacturing." Monthly data for the period 1967 to 1986 is found in Report 233, Pages xx to xx..

[2]Statistics Canada, Labour Division, Employment and Payrolls Section, Ottawa: "Employment, Earnings and Hours" Monthly data for the period 1983 to 1986 is found in Report 233.

[3]Reports 175 through 185 list this series title incorrectly as "Metal Mining, Including Milling (SIC 050-099)."

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GOVERNMENT STATISTICS

REPUBLIC OF SOUTH AFRICA

		Average Declared Working Costs per Metric Ton of Gold Ore Milled (Rand)[1]	Tonnage-Weighted Index of Average Working Costs per Metric Ton of Gold Ore Milled (March 1982 = 100)[2]	Consumer Price Index[3] (1980 = 100)[4]	Producer Price Index All Groups[5] (1980 = 100)	Total Employment in Mining and Quarrying (Code 35)[6]	Total Salaries and Wages in Mining and Quarrying (1,000 Rand) (Code 40)[6]
1975	Avg.	16.71	—	157.2	100.0	639,473	1,003,617
1976	Avg.	19.30	—	174.7	115.1	671,240	1,212,983
1977	Avg.	23.87	—	194.4	130.0	712,006	1,420,670
1978	Avg.[7]	27.14	—	137.2	142.7	664,571	1,537,169
1979	Avg.	30.18	—	155.3	164.5	692,209	1,830,632
1980	Avg.[8]	35.53	—	176.7	192.1	714,379	2,279,615
1981	Avg.	41.89	—	206.5	218.3	728,506	2,820,505
1982	Avg.[9]	47.25	104.2	233.5	248.7	707,552	3,246,071
1983	Avg.	51.88	115.0	262.2	274.8	696,579	3,644,772
1984	Avg.	58.95	130.3	292.8	297.9	712,080	4,196,764
1985	Avg.	68.76	151.68	192.6	181.2	726,804	396,956
Jan	1986	—	—	213.8	203.6	744,070	449,513
Feb	1986	—	—	215.8	206.9	754,458	438,562
Mar	1986	75.76	167.8	218.3	206.9	759,897	445,387
Apr	1986	—	—	222.2	208.9	756,388	437,563
May	1986	—	—	222.6	212.5	754,788	425,544
Jun	1986	77.65	172.0	224.4	213.3	756,637	462,365
Jul	1986	—	—	228.8	216.3	756,140	516,832
Aug	1986	—	—	232.2	220.3	760,929	502,968
Sep	1986	81.94	181.8	236.7	221.9	765,772	511,363
Oct	1986	—	—	239.3	226.8	763,953	512,897
Nov	1986	—	—	242.4	230.2	761,325	531,509
Dec	1986	85.38	189.9	244.9	232.1	752,264	536,970
Jan	1987	—	—	248.3	233.9	740,031	532,577
Feb	1987	—	—	251.0	237.0	757,872	598,986
Mar	1987	88.17	197.1	255.0	239.6	762,697	536,006
Apr	1987	—	—	258.2	242.5	761,850	533,487
May	1987	—	—	261.2	243.6	759,421R	530,981
Jun	1987	90.74	203.5	263.1	244.9	759,433	573,546
July	1987	—	—	266.2	246.8	681,409	566,232
Aug	1987	—	—	270.0	249.9	—	—
Sep	1987	100.79	224.7	273.4	252.4	—	—

P = Preliminary R = Revised since last month

[1]Chamber of Mines of South Africa, Johannesburg: "Analysis of Working Results," published quarterly.

[2]Page 16 of Report 178 contains description and calculation of index, and page 24 of Report 178 lists figures for 1982.

[3]Republic of South Africa Department of Statistics, Pretoria: "Government Gazette: Consumer Price Index for Urban Areas."

[4]The basis for calculation prior to January 1985, 1975 = 100. For annual averages prior to 1978, April 1970 = 100.

[5]Previously known as the Wholesale Price Index, now the Producer Price Index. The computation remains the same. The basis for calculation prior to January 1985, 1975 = 100.

[6]Bulletin of Statistics, Department of Statistics, Pretoria.

[7]Historical data for the Average Declared Working Costs and Consumer Price Index 1970-1979 appear on page 4.9 of Report 140.

[8]Monthly data for Codes 35 and 40, 1977-1980, appear on page 28 of Report 157

[9]Monthly data for 1979-82 appear on page 39 of Report 184.

UNITED STATES

		Producer Price Index[1]		Consumer Price Index[2] (1967 = 100)	GNP Implicit Price Deflator[3] (1982 = 100)	Gross Average Hourly Earnings of Production or Non-supervisory Workers (US$)[4]			
		Industrial Commodities (1967 = 100)	All Commodities (1967 = 100)			Metal Mining (SIC 10)	Primary Non-ferrous Metals (SIC 333)	Chemicals and Allied Products (SIC 28)	Electric and Electronic Equipment (SIC 36)
1980	Avg.	274.8	268.8	246.8	85.7	10.26	10.63	8.30	6.94
1981	Avg.	304.1	293.4	272.4	94.0	11.55	11.98	9.12	7.62
1982	Avg.	312.3	299.3	289.1	100.0	12.31	12.93	9.96	8.21
1983	Avg.	315.7	303.1	298.4	103.9	12.58	13.43	10.58	8.67
1984	Avg.	322.6	310.3	311.1	107.7	13.05	13.43	11.07	9.04
1985	Avg.	323.8	308.7	322.2	111.2	13.38	13.74	11.56	9.46
1986	Avg.	312.2	299.8	328.4	114.1	13.20	13.49	11.98	9.65
Jan	1986	323.8	308.9	328.4	—	13.41	13.68	11.87	9.58
Feb	1986	318.9	304.4	327.5	—	13.46	13.80	11.83	9.57
Mar	1986	314.0	300.3	326.0	112.9	13.41	13.91	11.80	9.60
Apr	1986	311.6	298.2	325.3	—	13.47	13.89	11.84	9.60
May	1986	311.6	299.2	326.3	—	13.40	13.79	11.90	9.63
Jun	1986	311.8	299.0	327.9	113.7	13.50	13.50	11.95	9.59
Jul	1986	308.5	297.4	328.0	—	13.33	13.30	12.05	9.67
Aug	1986	307.9	297.2	328.6	—	12.96	13.13	11.99	9.64
Sep	1986	308.7	297.5	330.2	114.7	13.04	13.28	12.03	9.70
Oct	1986	309.6	298.4	330.5	—	12.85	13.16	12.08	9.67
Nov	1986	309.8	298.7	330.8	—	12.75	13.14	12.17	9.73
Dec	1986	309.8	298.5	331.1	114.9	12.70	13.03	12.20	9.82
Jan	1987	313.5	300.9	333.1	—	12.94	12.98	12.18	9.84
Feb	1987	314.9	302.2	334.4	—	12.99	12.83	12.21	9.84
Mar	1987	315.7	302.7	335.9	116.1	13.04	12.79	12.24	9.84
Apr	1987	317.3	305.0	337.7	—	13.16	12.90	12.30	9.82
May	1987	318.3	307.1	338.7	—	12.97	12.92	12.31	9.83
Jun	1987	319.9	308.2	340.1	117.2	13.05	12.93	12.27	9.84
Jul	1987	322.1R	309.8R	340.8	—	13.06	13.07	12.37	9.89
Aug	1987	323.8	310.5	342.7	—	13.03	13.07	12.34	9.90
Sep	1987	323.3	310.4	344.4	117.8	13.19R	13.44R	12.56	9.98
Oct	1987	324.9	311.4	345.3	—	12.94P	13.17P	12.53R	9.94R
Nov	1987	325.4	311.9	345.8	—	—	—	12.58P	9.98P

P = Preliminary R = Revised since last month

[1]US Bureau of Labor Statistics, Washington, D.C.: "Producer Prices and Price Indexes," (formerly "Wholesale Prices and Price Indexes"). Producer Price Indexes are revised four months after they are first released to reflect the availability of late reports and corrections by respondents. Historical data is presented in Report 233.

[2]US Bureau of Labor Statistics, Washington, D.C.: Consumer Price Index for All Urban Consumers, US City Average, All Items. Historical data is presented in Report 233.

[3]US Department of Commerce, Washington, D.C.: Bureau of Economic Analysis, National Income and Wealth Division: "Survey of Current Business." The GNP Implicit Price Deflator is published quarterly, and seasonally adjusted. Historical data is presented in Report 233.

[4]US Bureau of Labor Statistics, Washington, D.C.: "Employment and Earnings." All data based on 1972 revision of SIC Manual. Historical data is presented in Report 233.

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GOVERNMENT STATISTICS

AUSTRALIA

Consumer Price Index, All Groups[1]

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	32.4	—	—	31.9	—	—	32.2	—	—	32.7	—	—	32.8
1968	33.3	—	—	32.9	—	—	33.2	—	—	33.3	—	—	33.6
1969	34.2	—	—	33.9	—	—	34.1	—	—	34.3	—	—	34.6
1970	35.6	—	—	34.9	—	—	35.4	—	—	35.6	—	—	36.3
1971	37.7	—	—	36.7	—	—	37.3	—	—	38.0	—	—	38.9
1972	39.9	—	—	39.3	—	—	39.6	—	—	40.2	—	—	40.6
1973	43.7	—	—	41.5	—	—	42.9	—	—	44.4	—	—	46.0
1974	50.3	—	—	47.1	—	—	49.1	—	—	51.6	—	—	53.3
1975	57.9	—	—	55.4	—	—	57.4	—	—	57.8	—	—	61.0
1976	65.7	—	—	62.8	—	—	64.4	—	—	65.9	—	—	69.8
1977	73.8	—	—	71.4	—	—	73.1	—	—	74.5	—	—	76.3
1978	79.7	—	—	77.3	—	—	78.8	—	—	80.4	—	—	82.2
1979	86.9	—	—	83.6	—	—	85.8	—	—	87.8	—	—	90.4
1980	95.8	—	—	92.4	—	—	95.0	—	—	96.8	—	—	98.8
1981	105.0	—	—	101.1	—	—	103.4	—	—	105.5	—	—	109.9
1982	116.7	—	—	111.8	—	—	114.5	—	—	118.5	—	—	122.0
1983	128.5	—	—	124.7	—	—	127.3	—	—	129.4	—	—	132.5
1984	133.6	—	—	132.0	—	—	132.3	—	—	134.0	—	—	135.9
1985	142.6	—	—	137.8	—	—	141.1	—	—	144.2	—	—	147.1
1986	155.5	—	—	150.5	—	—	153.0	—	—	157.0	—	—	161.5

[1]Weighted average of six capital cities for 1967 to 1980.Weighted average for eight capital cities for 1981 to 1987. 1980-81 = 100.0

Price Index of Materials Used in Manufacturing Industries, All Groups[2]

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	—	—	—	—	—	—	—	—	—	—	—	—	—
1968	—	—	—	—	—	—	—	24.8	24.3	23.9	23.8	23.5	23.6
1969	24.5	23.8	24.2	24.3	24.6	24.4	24.5	24.9	24.9	24.8	24.5	24.5	24.6
1970	24.5	24.6	24.7	24.9	25.1	25.0	24.8	24.7	24.2	24.1	23.9	23.7	23.9
1971	24.5	23.9	24.1	24.2	24.3	24.4	24.6	25.1	25.2	24.9	24.7	24.4	24.3
1972	25.5	24.5	24.8	24.8	24.6	24.9	24.9	25.7	26.3	26.4	26.3	26.3	26.3
1973	30.0	26.4	28.5	29.7	29.2	29.4	29.7	30.4	31.4	31.4	31.1	31.4	32.0
1974	34.3	32.6	33.7	33.7	34.4	34.5	33.8	35.2	35.3	34.0	34.5	34.5	34.9
1975	36.3	34.9	34.9	35.2	35.9	35.8	35.4	35.9	36.5	37.3	37.9	37.9	38.1
1976	40.7	38.8	38.9	39.0	39.1	39.5	40.4	41.2	42.0	42.2	42.2	41.4	43.2
1977	46.3	44.3	45.2	46.1	46.6	46.6	46.8	46.7	46.9	47.1	46.8	46.2	47.0
1978	52.0	47.7	48.6	48.4	49.1	49.4	51.2	52.3	53.5	55.1	55.6	56.1	56.9
1979	69.5	59.5	61.1	63.7	66.1	69.6	71.2	72.0	70.8	73.0	74.7	74.9	77.1
1980	83.1	82.1	83.4	82.1	79.3	81.0	81.8	84.0	85.0	84.6	84.1	84.6	84.9
1981	85.9	86.4	86.1	85.7	85.6	85.3	87.0	86.4	87.1	86.5	85.1	84.8	84.5
1982	89.0	85.7	85.8	87.0	88.9	88.9	88.8	89.3	89.9	90.6	91.4	90.7	90.5
1983	96.9	93.1	93.5	95.9	98.3	100.1	100.3	98.6	97.3	97.3	96.0	95.5	96.4
1984	98.0	96.4	97.2	97.5	97.6	97.5	97.7	98.6	99.7	99.4	98.6	98.3	98.0
1985	107.3	98.8	100.4	104.0	106.6	109.7	110.8	110.8	110.2	108.7	108.4	109.4	109.9
1986	101.5	109.5	108.7	99.4	94.2	93.5	95.6	97.8	97.9	105.4	105.9	104.9	105.2

[2]Base of Index: Year 1984/85 = 100.0

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AUSTRALIA

Wage Earners: Indexes of Weekly Award Rates of Pay[3]

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	32.0	31.6	31.6	31.6	31.7	31.7	31.7	32.4	32.4	32.4	32.4	32.5	32.5
1968	33.9	32.6	32.8	32.7	32.7	33.9	34.0	34.0	34.1	34.3	35.2	35.1	35.3
1969	35.6	35.3	35.3	35.3	35.4	35.4	35.5	35.6	35.6	35.7	35.8	35.9	36.7
1970	37.2	36.8	36.9	37.0	37.0	37.0	37.0	37.0	37.2	37.1	37.7	37.8	37.8
1971	41.0	39.6	39.6	39.6	40.1	40.2	40.5	40.7	40.8	42.3	42.6	42.7	42.9
1972	44.2	42.8	42.8	42.9	43.1	44.5	44.7	44.9	44.8	44.9	45.0	45.2	44.5
1973	49.2	45.6	47.1	47.0	47.1	49.4	49.8	50.0	50.4	50.7	50.8	50.9	51.0
1974	67.1	51.2	53.0	62.0	63.2	69.3	69.6	70.3	69.8	72.8	73.6	74.3	76.3
1975	82.1	76.0	76.3	76.5	76.8	79.8	79.5	79.3	79.3	90.1	90.6	90.6	90.6
1976	99.7	91.3	97.1	97.1	97.2	99.6	100.0	100.2	102.0	102.2	102.0	104.0	104.2
1977	110.8	104.7	105.8	108.8	109.1	111.3	111.2	111.3	113.2	113.1	113.1	113.1	114.8
1978	117.7	114.9	116.7	116.8	116.5	116.4	117.7	117.8	117.8	118.0	118.2	118.3	123.5
1979	127.9	123.8	123.9	124.5	124.9	125.5	129.5	129.7	130.4	130.8	130.6	130.3	131.3
1980	140.8	138.6	138.5	138.5	138.6	138.6	138.3	143.1	142.5	142.5	143.0	143.2	143.9
1981	154.1	149.3	149.2	148.9	148.7	154.0	154.5	154.6	154.8	154.8	155.3	157.3	167.3
1982	174.9	169.3	171.1	171.4	171.4	171.9	173.2	177.2	178.2	178.4	178.4	178.5	179.5
1983	181.9	179.6	179.8	179.7	180.1	180.1	180.2	179.9	179.9	179.8	187.8	187.9	187.7
1984	194.4	187.9	187.7	187.5	195.4	196.3	196.7	196.7	196.7	196.7	196.7	197.4	197.4
1985	202.7	197.4	197.8	197.8	202.8	202.4	202.4	202.4	202.9	203.0	202.9	210.4	210.5
1986	213.0	210.5	210.5	210.5	210.5	210.5	210.5	215.3	215.3	215.3	215.5	215.7	215.6

[3]Base: Weighted Average Minimum Weekly Award Rate, June 1976 = 100.0

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GOVERNMENT STATISTICS

CANADA

Industry Selling Price Index[1], Total Manufacturing Industries (Series D 500000) (1971 = 100)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	90.4	89.6	89.9	90.1	90.2	90.3	90.5	90.5	90.6	90.8	90.8	90.8	91.2
1968	92.3	91.6	91.9	92.1	91.9	91.9	92.3	92.2	92.4	92.7	92.6	93.0	93.3
1969	95.8	94.3	94.7	95.2	95.4	95.8	96.1	95.8	96.0	96.2	96.2	96.5	97.2
1970	98.1	98.1	98.3	98.5	98.6	98.5	98.1	97.8	97.6	97.6	97.9	97.9	97.8
1971	100.0	98.3	98.7	99.0	99.6	99.6	99.9	100.4	100.6	100.7	100.8	100.9	101.2
1972	104.4	102.2	102.8	103.2	103.7	103.9	104.0	104.5	104.7	105.1	105.6	106.1	106.9
1973	116.1	108.7	109.8	111.3	112.4	114.1	115.0	116.7	120.2	119.9	120.6	121.3	122.8
1974	138.1	127.2	129.1	131.1	133.9	135.7	136.7	139.7	141.8	143.1	145.0	147.0	147.4
1975	153.7	149.3	150.0	150.0	151.4	152.8	152.8	153.9	155.2	156.3	157.4	157.3	157.6
1976	161.6	158.4	158.6	159.2	159.9	160.9	161.5	161.9	162.2	163.4	163.4	163.6	165.6
1977	174.3	167.5	168.8	171.1	172.9	173.9	174.1	175.3	175.8	176.9	177.8	178.6	179.2
1978	190.4	181.5	182.8	184.4	187.2	188.0	189.0	190.1	191.7	194.0	197.6	198.6	199.4
1979	217.9	204.8	208.5	210.4	212.8	214.5	216.0	218.3	220.0	223.4	227.4	228.1	230.4
1980	247.2	239.0	240.8	239.5	241.1	242.4	243.7	246.3	249.4	252.0	256.0	257.8	258.4
1981	272.4	263.3	263.7	265.5	267.9	270.0	272.3	274.3	276.2	276.9	279.3	278.8	280.0
1982	288.8	281.9	283.5	284.8	287.7	288.8	289.7	290.3	290.3	292.4	292.1	291.3	292.3
1983	298.7	292.7	293.5	295.2	297.1	298.5	299.3	300.4	301.3	301.1	301.6	301.8	302.9
1984	310.9	305.4	306.6	308.7	310.5	310.6	311.0	312.8	312.7	312.3	312.3	313.6	314.2
1985	319.2	315.9	316.5	318.0	318.3	318.8	319.1	319.3	319.3	319.6	320.8	321.8	323.1

[1]This Index was replaced by the Industrial Product Price Index, Series 613420.

Industrial Product Price Index (Series D 613420) — Total: All Commodities (1981=100)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	33.4	32.9	33.0	33.1	33.1	33.1	33.2	33.2	33.3	33.3	33.3	33.3	33.5
1968	33.9	33.6	33.7	33.8	33.7	33.7	33.9	33.8	33.9	34.0	34.0	34.1	34.3
1969	35.2	34.6	34.8	34.9	35.0	35.2	35.3	35.2	35.2	35.3	35.3	35.4	35.7
1970	36.0	36.0	36.1	36.2	36.2	36.2	36.0	35.9	35.8	35.8	35.9	35.9	35.9
1971	36.7	36.1	36.2	36.3	36.6	36.6	36.7	36.9	36.9	37.0	37.0	37.0	37.2
1972	38.3	37.5	37.7	37.9	38.1	38.1	38.2	38.4	38.4	38.6	38.8	39.0	39.2
1973	42.6	39.9	40.3	40.9	41.3	41.9	42.2	42.8	44.1	44.0	44.3	44.5	45.1
1974	50.7	46.7	47.4	48.1	49.2	49.8	50.2	51.3	52.1	52.5	53.2	54.0	54.1
1975	56.4	54.8	55.1	55.1	55.6	56.1	56.1	56.5	57.0	57.4	57.8	57.7	57.9
1976	59.3	58.1	58.2	58.4	58.7	59.1	59.3	59.4	59.5	60.0	60.0	60.1	60.8
1977	64.0	61.5	62.0	62.8	63.5	63.8	63.9	64.4	64.5	64.9	65.3	65.6	65.8
1978	69.9	66.6	67.1	67.7	68.7	69.0	69.4	69.8	70.4	71.2	72.5	72.9	73.2
1979	80.0	75.2	76.5	77.2	78.1	78.7	79.3	80.1	80.8	82.0	83.5	83.7	84.6
1980	90.7	87.7	88.4	87.9	88.5	89.0	89.5	90.4	91.6	92.5	94.0	94.6	94.9
1981	100.0	96.2	96.7	97.4	98.3	99.1	100.1	100.8	101.5	101.8	102.7	102.5	102.9
1982	106.7	103.9	104.6	105.3	106.1	106.6	107.3	107.4	107.3	108.0	108.1	107.7	108.0
1983	110.4	108.0	108.0	109.0	109.6	110.0	110.9	111.2	111.5	111.3	111.7	111.6	112.2
1984	115.4	113.2	113.6	114.5	115.1	115.2	115.3	116.3	116.2	116.1	116.1	116.5	116.8
1985	118.6	117.5	117.7	118.4	118.3	118.6	118.6	118.6	118.4	118.6	119.0	119.3	120.0
1986	119.6	121.0	120.8	120.1	119.3	118.4	118.6	118.8	119.1	119.4	119.9	119.9	119.7

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CANADA

Wage Earner Data — Average Hourly Earnings (C$), Firms of All Sizes

Uranium Mines (SIC 057)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	17.22	—	—	16.80	16.84	17.03	17.03	16.49	16.94	17.67	17.74	17.83	17.85
1984	17.89	17.75	17.79	18.06	18.07	18.49	18.09	17.82	17.25	17.69	17.65	18.05	17.96
1985	18.53	18.06	18.79	18.25	18.64	19.42	18.50	18.15	17.08	18.54	18.75	19.06	19.08
1986	19.38	18.16	19.53	19.05	19.39	19.55	19.81	19.52	18.40	19.33	19.98	20.12	19.68

Metal Mines (SIC 051—059)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	14.86	—	—	14.93	14.49	14.59	14.69	14.44	14.45	14.99	15.37	15.39	15.21
1984	15.85	15.37	15.69	15.62	15.93	15.74	15.58	15.82	15.46	16.06	16.25	16.23	16.49
1985	16.48	16.23	16.51	16.31	16.54	16.61	16.30	16.37	16.13	16.65	16.61	16.76	16.67
1986	16.70	16.32	16.67	16.75	16.79	16.79	16.73	16.44	16.27	16.72	16.92	17.12	16.90

Mines, Quarries, and Oil Wells (SIC 051—099)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	14.18	—	—	14.20	14.03	14.00	13.97	13.84	13.80	14.31	14.55	14.57	14.56
1984	14.97	14.64	14.80	14.72	15.00	14.96	14.70	14.82	14.82	15.24	15.16	15.33	15.49
1985	15.56	15.49	15.49	15.46	15.69	15.65	15.50	15.31	15.20	15.61	15.59	15.77	15.90
1986	15.76	15.75	15.88	15.82	15.84	15.67	15.53	15.37	15.35	15.67	16.00	16.13	16.08

Metal Rolling, Casting, and Extruding (SIC 298)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	10.67	—	—	10.12	10.69	10.40	10.42	10.41	10.67	10.93	10.62	11.25	11.22
1984	11.11	11.48	11.46	11.43	10.95	10.76	11.01	10.78	10.95	11.14	11.20	11.13	11.01
1985	11.85	11.44	11.70	11.62	11.89	11.91	11.80	11.83	11.98	12.06	12.21	11.99	11.74
1986	12.28	12.16	12.27	12.27	12.33	12.41	12.56	12.42	11.98	12.12	12.27	12.35	12.25

Chemical and Chemical Products Industries (SIC 372—379)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983	11.10	—	—	10.91	10.94	10.89	10.97	10.96	11.11	11.21	11.22	11.30	11.43
1984	11.68	11.61	11.43	11.50	11.55	11.57	11.60	11.74	11.70	11.82	11.88	11.88	11.91
1985	12.12	11.96	11.98	11.94	11.96	12.07	12.06	12.05	12.11	12.18	12.24	12.40	12.50
1986	12.58	12.43	12.36	12.45	12.45	12.42	12.40	12.43	12.61	12.81	12.85	12.84	12.90

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GOVERNMENT STATISTICS

CANADA

Consumer Price Index

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	36.5	35.8	35.8	35.9	36.2	36.3	36.5	36.8	37.0	36.9	36.9	37.0	37.2
1968	38.0	37.4	37.4	37.5	37.7	37.7	37.9	38.1	38.2	38.3	38.4	38.6	38.7
1969	39.7	38.8	38.8	39.0	39.4	39.5	39.8	40.0	40.1	40.1	40.1	40.3	40.5
1970	41.0	40.6	40.7	40.8	41.0	41.0	41.1	41.3	41.3	41.2	41.2	41.2	41.1
1971	42.2	41.2	41.4	41.5	41.8	42.0	42.1	42.4	42.7	42.6	42.7	42.8	43.1
1972	44.2	43.3	43.4	43.5	43.7	43.8	43.8	44.4	44.7	44.9	44.9	-45.0	45.3
1973	47.6	45.7	46.0	46.1	46.6	46.9	47.4	47.8	48.4	48.7	48.8	49.2	49.
1974	52.8	49.9	50.4	50.9	51.2	52.1	52.8	53.1	53.7	54.0	54.5	55.1	55.6
1975	58.5	55.9	56.3	56.6	56.9	57.4	58.2	59.0	59.6	59.7	60.3	60.8	60.9
1976	62.9	61.2	61.5	61.7	62.0	62.5	62.8	63.0	63.3	63.6	64.0	64.2	64.5
1977	67.9	65.0	65.6	66.3	66.7	67.2	67.7	68.3	68.6	69.0	69.6	70.1	70.6
1978	73.9	70.8	71.3	72.1	72.3	73.3	73.9	75.0	75.1	74.9	75.7	76.3	76.5
1979	80.7	77.1	77.8	78.8	79.3	80.1	80.5	81.1	81.4	82.1	82.7	83.5	84.0
1980	88.9	84.5	85.2	86.1	86.6	87.6	88.6	89.3	90.1	90.9	91.7	92.9	93.4
1981	100.0	94.6	95.6	96.8	97.6	98.4	100.0	100.8	101.6	102.3	103.3	104.2	104.7
1982	110.8	105.4	106.7	108.0	108.6	110.1	111.2	111.8	112.3	112.9	113.6	114.4	114.4
1983	117.2	114.1	114.6	115.8	115.8	116.1	117.4	117.9	118.5	118.5	119.2	119.2	119.6
1984	122.3	120.2	120.9	121.2	121.5	121.7	122.2	122.9	122.9	123.0	123.2	124.0	124.1
1985	127.2	124.6	125.4	125.7	126.2	126.5	127.2	127.6	127.8	128.0	128.4	128.9	129.5
1986	132.4	130.1	130.6	130.9	131.1	131.7	131.9	132.9	133.3	133.3	134.0	134.7	134.9

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UNITED STATES

Consumer Price Index[1] — U.S. City Average (All Items - All Urban Consumers)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	100.0	98.6	98.7	98.9	99.1	99.4	99.7	100.2	100.5	100.7	101.0	101.3	101.6
1968	104.2	102.0	102.3	102.8	103.1	103.4	104.0	104.5	104.8	105.1	105.7	106.1	106.4
1969	109.8	106.7	107.1	108.0	108.7	109.0	109.7	110.2	110.7	111.2	111.6	112.2	112.9
1970	116.3	113.3	113.9	114.5	115.2	115.7	116.3	116.7	116.9	117.5	118.1	118.5	119.1
1971	121.3	119.2	119.4	119.8	120.2	120.8	121.5	121.8	122.1	122.2	122.4	122.6	123.1
1972	125.3	123.2	123.8	124.0	124.3	124.7	125.0	125.5	125.7	126.2	126.6	126.9	127.3
1973	133.1	127.7	128.6	129.8	130.7	131.5	132.4	132.7	135.1	135.5	136.6	137.6	138.5
1974	147.7	139.7	141.5	143.1	143.9	145.5	146.9	148.0	149.9	151.7	153.0	154.3	155.4
1975	161.2	156.1	157.2	157.8	158.6	159.3	160.6	162.3	162.8	163.6	164.6	165.6	166.3
1976	170.5	166.7	167.1	167.5	168.2	169.2	170.1	171.1	171.9	172.6	173.3	173.8	174.3
1977	181.5	175.3	177.1	178.2	179.6	180.6	181.8	182.6	183.3	184.0	184.5	185.4	186.1
1978	195.4	187.2	188.4	189.8	191.5	193.3	195.3	196.7	197.8	199.3	200.9	202.0	202.9
1979	217.4	204.7	207.1	209.1	211.5	214.1	216.6	218.9	221.1	223.4	225.4	227.5	229.9
1980	246.8	233.2	236.4	239.8	242.5	244.9	247.6	247.8	249.4	251.7	253.9	256.2	258.4
1981	272.4	260.5	263.2	265.1	266.8	269.0	271.3	274.4	276.5	279.3	279.9	280.7	281.5
1982	289.1	282.5	283.4	283.1	284.3	287.1	290.6	292.2	292.8	293.3	294.1	293.6	292.4
1983	298.4	293.1	293.2	293.4	295.5	297.1	298.1	299.3	300.3	301.8	302.6	303.1	303.5
1984	311.1	305.2	306.6	307.3	308.8	309.7	310.7	311.7	313.0	314.5	315.3	315.3	315.5
1985	322.2	316.1	317.4	318.8	320.1	321.3	322.3	322.8	323.5	324.5	325.5	326.6	327.4
1986	328.4	328.4	327.5	326.0	325.3	326.3	327.9	328.0	328.6	330.2	330.5	330.8	331.1

Producer Price Index[1] — Industrial Commodities

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	100.0	99.5	99.7	99.7	99.6	99.7	99.7	99.7	100.0	100.2	100.5	100.8	101.1
1968	102.5	101.5	102.0	102.2	102.4	102.3	102.4	102.4	102.5	102.8	103.3	103.4	103.8
1969	106.0	104.3	104.9	105.4	105.5	105.5	105.6	105.7	106.1	106.5	107.1	107.4	107.8
1970	110.0	108.3	108.6	108.8	109.3	109.6	109.9	110.1	110.2	110.4	111.2	111.3	111.7
1971	114.1	112.2	112.5	113.0	113.4	113.8	114.0	114.6	115.3	115.1	115.1	115.0	115.5
1972	117.9	115.9	116.5	116.8	117.3	117.6	117.9	118.1	118.5	118.7	118.8	119.1	119.6
1973	125.9	120.0	121.3	122.8	124.2	125.3	126.0	126.1	126.7	127.4	128.5	130.1	132.2
1974	153.8	135.3	138.2	142.4	146.6	150.5	153.6	157.8	161.6	162.9	164.8	165.8	166.1
1975	171.5	167.5	168.4	168.9	169.7	170.3	170.7	171.2	172.2	173.1	174.7	175.4	176.1
1976	182.4	177.4	178.1	179.0	180.1	180.5	181.5	182.7	183.8	184.8	186.3	187.1	187.4
1977	195.1	188.4	190.0	191.7	193.3	194.2	194.7	195.9	196.9	197.8	199.1	199.3	200.0
1978	209.4	201.6	202.9	204.1	206.1	207.4	208.7	210.1	211.4	212.5	214.7	216.0	217.2
1979	236.5	220.0	222.5	225.4	229.0	231.6	234.0	237.5	240.6	244.2	249.0	250.6	253.1
1980	274.8	260.6	265.9	268.6	271.3	271.9	273.5	276.2	278.2	278.8	282.0	283.4	286.6
1981	304.1	291.5	295.7	299.6	303.5	304.7	305.1	306.2	307.2	307.4	309.0	309.3	310.0
1982	312.3	311.8	311.6	311.0	309.9	309.6	310.6	312.8	313.2	312.7	314.3	315.0	315.2
1983	315.7	313.9	313.9	313.5	312.4	313.6	315.3	316.5	317.3	317.1	318.5	318.3	318.4
1984	322.6	319.1	320.6	321.9	322.6	323.2	323.8	323.9	323.3	322.2	323.4	323.8	323.0
1985	323.8	322.9	322.2	322.5	323.8	325.3	324.8	324.4	323.7	322.3	324.2	324.7	325.0
1986	312.2	323.8	318.9	314.0	311.6	311.6	311.8	308.5	307.9	308.7	309.6	309.8	309.8

[1](Bureau of Labor Statistics) 1967 = 100.0

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GOVERNMENT STATISTICS

UNITED STATES

Producer Price Index[2] — All Commodities

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	100.0	100.1	99.9	99.6	99.2	99.7	100.2	100.3	100.0	100.1	100.1	100.1	100.8
1968	102.5	101.1	101.9	102.1	102.1	102.4	102.5	102.8	102.5	102.9	102.9	103.3	103.6
1969	106.5	104.3	104.8	105.4	105.5	106.3	106.8	107.0	106.9	107.1	107.4	108.1	108.6
1970	110.4	109.3	109.7	109.9	110.0	110.0	110.4	110.9	110.4	111.0	110.9	110.9	111.0
1971	114.0	111.8	112.8	113.1	113.4	113.9	114.4	114.7	115.1	114.6	114.5	114.6	115.6
1972	119.1	116.3	117.3	117.4	117.5	118.2	118.8	119.7	119.9	120.2	120.0	120.7	122.9
1973	134.7	124.5	126.9	129.8	130.5	133.2	136.0	134.3	142.1	139.7	138.7	139.2	141.8
1974	160.1	146.6	149.5	151.4	152.7	155.0	155.7	161.7	167.4	167.2	170.2	171.9	171.5
1975	174.9	171.8	171.3	170.4	172.1	173.2	173.7	175.7	176.7	177.7	178.9	178.2	178.7
1976	183.0	179.4	179.4	179.7	181.3	181.9	183.2	184.4	183.8	184.8	185.3	185.6	187.1
1977	194.2	188.1	190.2	192.0	194.3	195.2	194.5	194.8	194.6	195.3	196.3	197.1	198.2
1978	209.3	200.1	202.1	203.7	206.5	208.0	209.6	210.7	210.6	212.4	214.9	215.7	217.5
1979	235.6	220.8	224.1	226.7	230.0	232.0	233.5	236.9	238.3	242.0	245.6	247.2	249.7
1980	268.8	254.9	260.2	261.9	262.8	264.2	265.6	270.4	273.8	274.6	277.8	279.1	280.8
1981	293.4	284.8	287.6	290.3	293.4	294.1	294.8	296.2	296.4	295.7	296.1	295.5	295.8
1982	299.3	298.3	298.6	298.0	298.0	298.6	299.3	300.4	300.2	299.3	299.8	300.3	300.7
1983	303.1	299.9	300.9	300.6	300.6	301.5	302.4	303.2	304.7	305.3	306.0	305.5	306.1
1984	310.3	308.0	308.9	311.0	311.3	311.5	311.3	311.9	310.7	309.3	309.4	310.3	309.8
1985	308.7	309.5	309.1	308.6	309.3	309.8	309.2	309.0	307.3	305.5	307.9	309.5	310.2
1986	299.8	308.9	304.4	300.3	298.2	299.2	299.0	297.4	297.2	297.5	298.4	298.7	298.5

[2](Bureau of Labor Statistics)1967 = 100.0

Chemical and Allied Products, Average Hourly Earnings (SIC 28)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	3.10	3.04	3.05	3.05	3.06	3.07	3.10	3.13	3.12	3.14	3.15	3.16	3.17
1968	3.26	3.20	3.19	3.19	3.22	3.23	3.26	3.28	3.29	3.31	3.31	3.33	3.36
1969	3.47	3.37	3.37	3.38	3.41	3.43	3.46	3.49	3.50	3.52	3.55	3.57	3.58
1970	3.69	3.60	3.60	3.60	3.62	3.64	3.68	3.71	3.73	3.78	3.77	3.79	3.81
1971	3.97	3.84	3.85	3.85	3.90	3.92	3.96	4.02	4.02	4.06	4.04	4.04	4.11
1972	4.26	4.15	4.17	4.17	4.18	4.22	4.25	4.28	4.29	4.35	4.34	4.34	4.38
1973	4.51	4.41	4.40	4.40	4.44	4.46	4.49	4.53	4.54	4.57	4.59	4.62	4.64
1974	4.88	4.67	4.68	4.69	4.75	4.76	4.82	4.91	4.94	5.01	5.04	5.10	5.15
1975	5.39	5.17	5.18	5.21	5.24	5.31	5.37	5.43	5.46	5.51	5.53	5.59	5.63
1976	5.91	5.68	5.71	5.72	5.80	[illegible]	5.87	5.95	5.96	6.05	6.07	6.11	6.16
1977	6.43	6.19	6.20	6.23	6.30	6.33	6.39	6.47	6.49	6.57	6.62	6.66	6.73
1978	7.02	6.78	6.82	6.84	6.87	6.94	6.97	7.05	7.06	7.14	7.20	7.23	7.29
1979	7.60	7.33	7.33	7.37	7.52	7.48	7.54	7.61	7.66	7.74	7.83	7.89	7.93
1980	8.30	7.98	8.01	8.06	8.13	8.18	8.25	8.37	8.40	8.47	8.53	8.60	8.69
1981	9.12	8.75	8.80	8.85	8.95	8.99	9.06	9.16	9.18	9.37	9.36	9.41	9.51
1982	9.96	9.67	9.67	9.70	9.79	9.81	9.94	10.01	10.01	10.19	10.23	10.26	10.32
1983	10.58	10.34	10.42	10.40	10.44	10.50	10.51	10.58	10.61	10.69	10.77	10.84	10.87
1984	11.07	10.88	10.87	10.91	10.94	10.99	11.00	11.09	11.09	11.19	11.28	11.31	11.33
1985	11.56	11.38	11.38	11.36	11.47	11.45	11.51	11.59	11.61	11.66	11.71	11.81	11.86
1986	11.98	11.87	11.83	11.80	11.84	11.90	11.95	12.05	11.99	12.03	12.08	12.17	12.20

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UNITED STATES

Metal Mining, Average Hourly Earnings (SIC 10)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	3.24	3.20	3.20	3.23	3.24	3.23	3.25	3.24	3.24	3.29	3.28	3.28	3.29
1968	3.42	3.31	3.32	3.31	3.37	3.37	3.40	3.41	3.47	3.51	3.48	3.51	3.51
1969	3.64	3.51	3.53	3.54	3.60	3.62	3.64	3.65	3.69	3.72	3.73	3.73	3.74
1970	3.88	3.75	3.77	3.77	3.83	3.85	3.88	3.91	3.91	4.01	3.96	3.99	3.96
1971	4.12	3.95	3.93	3.96	4.03	4.03	4.03	3.99	4.30	4.38	4.30	4.28	4.35
1972	4.56	4.46	4.44	4.46	4.49	4.47	4.48	4.59	4.64	4.69	4.65	4.65	4.68
1973	4.84	4.68	4.71	4.71	4.77	4.74	4.75	4.80	4.85	4.98	4.97	5.00	5.02
1974	5.44	5.10	5.12	5.15	5.29	5.29	5.31	5.36	5.53	5.68	5.75	5.80	5.86
1975	6.13	5.90	5.90	5.89	5.93	6.00	6.02	6.11	6.23	6.35	6.38	6.40	6.44
1976	6.76	6.53	6.51	6.55	6.64	6.63	6.67	6.76	6.89	7.00	6.93	6.99	7.00
1977	7.28	6.95	7.02	7.07	7.12	7.19	7.26	7.32	7.37	7.49	7.52	7.63	7.65
1978	8.23	7.73	7.79	7.84	7.97	8.04	8.08	8.25	8.40	8.56	8.60	8.71	8.72
1979	9.27	8.71	8.81	8.85	9.03	9.06	9.09	9.33	9.39	9.63	9.67	9.79	9.81
1980	10.26	9.92	9.93	9.91	10.01	10.19	10.13	10.24	10.38	10.54	10.58	10.72	10.83
1981	11.55	10.90	11.13	11.11	11.28	11.24	11.29	11.60	11.84	12.10	12.08	12.12	12.07
1982	12.31	12.17	12.22	12.28	12.19	12.21	12.29	12.27	12.31	12.58	12.51	12.55	12.53
1983	12.58	12.56	12.61	12.39	12.51	12.44	12.55	12.59	12.54	12.62	12.68	12.64	12.78
1984	13.05	12.68	12.83	12.89	12.94	13.01	12.99	13.07	13.15	13.24	13.27	13.28	13.32
1985	13.38	13.29	13.31	13.29	13.43	13.24	13.21	13.44	13.55	13.44	13.49	13.49	13.45
1986	13.20	13.41	13.46	13.41	13.47	13.40	13.50	13.33	12.96	13.04	12.85	12.75	12.70

Primary Nonferrous Metals, Average Hourly Earnings (SIC 333)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	3.26	3.18	3.19	3.19	3.20	3.20	3.25	3.27	3.31	3.34	3.34	3.35	3.36
1968	3.48	3.38	3.36	3.38	3.48	3.36	3.45	3.47	3.52	3.53	3.53	3.56	3.58
1969	3.68	3.59	3.58	3.58	3.62	3.64	3.71	3.73	3.73	3.75	3.74	3.75	3.76
1970	3.87	3.78	3.77	3.76	3.80	3.83	3.88	3.94	3.92	3.98	3.90	3.92	3.95
1971	4.15	3.95	3.95	3.95	3.96	3.98	4.15	4.32	4.35	4.34	4.28	4.29	4.40
1972	4.59	4.47	4.45	4.46	4.47	4.47	4.57	4.63	4.65	4.69	4.68	4.73	4.77
1973	4.98	4.79	4.79	4.83	4.82	4.85	4.96	5.03	5.04	5.10	5.12	5.15	5.22
1974	5.63	5.21	5.31	5.43	5.50	5.49	5.59	5.68	5.76	5.83	5.86	5.87	5.93
1975	6.24	5.97	5.96	6.04	6.04	6.07	6.25	6.34	6.40	6.49	6.53	6.52	6.44
1976	6.87	6.54	6.52	6.64	6.74	6.71	6.82	6.91	6.96	7.07	7.10	7.18	7.18
1977	7.67	7.16	7.20	7.24	7.34	7.37	7.71	7.83	7.78	8.01	8.07	8.12	8.15
1978	8.56	8.24	8.28	8.27	8.32	8.36	8.56	8.62	8.66	8.74	8.83	8.86	8.97
1979	9.50	9.00	9.01	9.11	9.49	9.14	9.44	9.57	9.70	9.79	9.87	9.86	9.92
1980	10.63	10.06	10.02	10.24	10.31	10.37	10.70	10.84	10.80	10.95	11.01	11.08	11.33
1981	11.98	11.32	11.36	11.51	11.64	11.70	11.90	12.22	12.12	12.72	12.45	12.51	12.48
1982	12.93	12.69	12.64	12.73	12.72	12.74	12.94	12.94	13.00	13.50	13.25	13.21	13.04
1983	13.43	13.32	13.28	13.33	13.33	13.60	13.37	13.55	13.46	13.45	13.54	13.55	13.32
1984	13.43	13.37	13.33	13.32	13.29	13.36	13.39	13.35	13.51	13.39	13.54	13.76	13.66
1985	13.74	13.71	13.74	13.98	13.63	13.60	13.67	13.83	13.70	13.67	13.65	13.95	13.79
1986	13.49	13.68	13.80	13.91	13.89	13.79	13.50	13.30	13.13	13.28	13.16	13.14	13.03

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GOVERNMENT STATISTICS

UNITED STATES

Electric and Electronic Equipment — Average Hourly Earnings (SIC 36)

Year	Avg.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1967	2.77	2.70	2.72	2.73	2.74	2.76	2.78	2.79	2.78	2.78	2.81	2.83	2.86
1968	2.93	2.87	2.87	2.88	2.87	2.90	2.91	2.92	2.92	2.95	2.98	3.00	3.00
1969	3.09	3.04	3.04	3.04	3.06	3.07	3.08	3.09	3.10	3.13	3.13	3.12	3.16
1970	3.28	3.17	3.20	3.23	3.24	3.26	3.29	3.31	3.30	3.32	3.31	3.33	3.41
1971	3.49	3.42	3.42	3.45	3.45	3.48	3.48	3.50	3.50	3.52	3.52	3.53	3.61
1972	3.71	3.62	3.64	3.65	3.66	3.68	3.69	3.70	3.72	3.76	3.76	3.78	3.83
1973	3.91	3.83	3.82	3.82	3.85	3.86	3.88	3.92	3.95	3.98	3.99	3.99	4.06
1974	4.21	4.05	4.04	4.06	4.06	4.13	4.20	4.22	4.22	4.32	4.37	4.40	4.49
1975	4.64	4.49	4.50	4.54	4.56	4.59	4.64	4.66	4.67	4.73	4.73	4.76	4.83
1976	4.96	4.81	4.81	4.84	4.80	4.86	4.87	4.95	5.00	5.07	5.11	5.13	5.20
1977	5.39	5.23	5.22	5.24	5.26	5.29	5.34	5.39	5.44	5.50	5.51	5.55	5.64
1978	5.82	5.65	5.67	5.67	5.69	5.72	5.74	5.83	5.86	5.94	5.95	5.98	6.10
1979	6.32	6.12	6.14	6.17	6.12	6.22	6.26	6.28	6.36	6.46	6.48	6.51	6.63
1980	6.94	6.66	6.70	6.76	6.78	6.76	6.85	6.94	6.99	7.11	7.16	7.25	7.35
1981	7.62	7.37	7.40	7.44	7.47	7.51	7.57	7.65	7.74	7.76	7.82	7.84	7.92
1982	8.21	8.00	7.98	8.04	8.06	8.09	8.14	8.22	8.29	8.36	8.40	8.43	8.50
1983	8.67	8.52	8.55	8.58	8.58	8.59	8.63	8.70	8.64	8.76	8.74	8.80	8.80
1984	9.04	8.91	8.91	8.94	8.94	8.94	8.96	9.00	9.05	9.13	9.14	9.20	9.32
1985	9.46	9.33	9.32	9.38	9.40	9.39	9.46	9.47	9.49	9.54	9.54	9.59	9.67
1986	9.65	9.58	9.57	9.60	9.60	9.63	9.59	9.67	9.64	9.70	9.67	9.73	9.82

Implicit Price Deflator[3] — Gross National Product

Year	Avg.
1967	35.9
1968	37.7
1969	39.8
1970	42.0
1971	44.4
1972	46.5
1973	49.5
1974	54.0
1975	59.3
1976	63.1
1977	67.3
1978	72.2
1979	78.6
1980	85.7
1981	94.0
1982	100.0
1983	103.9
1984	107.7
1985	111.2
1986	114.1

[3](Bureau of Labor Statistics) 1982=100

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U.S. PRIME INTEREST RATE

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
1967	5.96	5.75	5.71	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.68	6.00	5.63
1968	6.00	6.00	6.00	6.20	6.50	6.50	6.50	6.50	6.45	6.25	6.25	6.60	6.31
1969	6.95	7.00	7.24	7.50	7.50	8.23	8.50	8.50	8.50	8.50	8.50	8.50	7.95
1970	8.50	8.50	8.39	8.00	8.00	8.00	8.00	8.00	7.83	7.50	7.28	6.92	7.91
1971	6.29	5.88	5.44	5.28	5.46	5.50	5.91	6.00	6.00	5.90	5.53	5.49	5.72
1972	5.18	4.75	4.75	4.97	5.00	5.04	5.25	5.27	5.50	5.73	5.75	5.79	5.25
1973	6.00	6.02	6.30	6.61	7.01	7.49	8.30	9.23	9.86	9.94	9.75	9.75	8.02
1974	9.73	9.21	8.85	10.02	11.25	11.54	11.97	12.00	12.00	11.68	10.83	10.50	10.80
1975	10.05	8.96	7.93	7.50	7.40	7.07	7.15	7.66	7.88	7.96	7.53	7.26	7.86
1976	7.00	6.75	6.75	6.75	6.75	7.20	7.25	7.01	7.00	6.77	6.50	6.35	6.84
1977	6.25	6.25	6.25	6.25	6.41	6.75	6.75	6.83	7.13	7.52	7.75	7.75	6.82
1978	7.93	8.00	8.00	8.00	8.27	8.63	9.00	9.01	9.41	9.94	10.94	11.55	9.06
1979	11.75	11.75	11.75	11.75	11.75	11.65	11.54	11.91	12.90	14.39	15.55	15.30	12.67
1980	15.25	15.63	18.31	19.77	16.57	12.63	11.48	11.12	12.23	13.79	16.06	20.35	15.27
1981	20.16	19.43	18.05	17.15	19.61	20.03	20.39	20.50	20.08	18.45	16.84	15.75	18.87
1982	15.75	16.56	16.50	16.50	16.50	16.50	16.26	14.39	13.50	12.52	11.85	11.50	14.86
1983	11.16	10.98	10.50	10.50	10.50	10.50	10.50	10.89	11.00	11.00	11.00	11.00	10.79
1984	11.00	11.00	11.21	11.93	12.39	12.60	13.00	13.00	12.97	12.58	11.77	11.06	12.04
1985	10.61	10.50	10.50	10.50	10.31	9.78	9.50	9.50	9.50	9.50	9.50	9.50	9.93
1986	9.50	9.50	9.10	8.83	8.50	8.50	8.16	7.90	7.50	7.50	7.50	7.50	8.33
1987	7.50	7.50	7.50	7.75	8.14	8.25	8.25	8.25	8.70	9.07	8.78	8.75P	

U.S. FEDERAL RESERVE DISCOUNT RATE

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
1967	4.50	4.50	4.50	4.10	4.00	4.00	4.00	4.00	4.00	4.00	4.18	4.50	4.19
1968	4.50	4.50	4.66	5.20	5.50	5.50	5.50	5.48	5.25	5.25	5.25	5.36	5.16
1969	5.50	5.50	5.50	5.95	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.87
1970	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.85	5.52	5.95
1971	5.23	4.91	4.75	4.75	4.75	4.75	4.88	5.00	5.00	5.00	4.90	4.63	4.88
1972	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
1973	4.77	5.05	5.50	5.50	5.90	6.33	6.98	7.29	7.50	7.50	7.50	7.50	6.44
1974	7.50	7.50	7.50	7.60	8.00	8.00	8.00	8.00	8.00	8.00	8.00	7.81	7.83
1975	7.40	6.82	6.40	6.25	6.12	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.25
1976	5.79	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.43	5.25	5.50
1977	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.27	5.75	5.80	6.00	6.00	5.46
1978	6.37	6.50	6.50	6.50	6.84	7.00	7.23	7.43	7.83	8.26	9.50	9.50	7.46
1979	9.50	9.50	9.50	9.50	9.50	9.50	9.69	10.24	10.70	11.77	12.00	12.00	10.28
1980	12.00	12.52	13.00	13.00	12.94	11.40	10.87	10.00	10.17	11.00	11.47	12.87	11.77
1981	13.00	13.00	13.00	13.00	13.87	14.00	14.00	14.00	14.00	14.00	13.03	12.10	13.42
1982	12.00	12.00	12.00	12.00	12.00	12.00	11.81	10.68	10.00	9.68	9.35	8.73	11.02
1983	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50
1984	8.50	8.50	8.50	8.87	9.00	9.00	9.00	9.00	9.00	9.00	8.83	8.37	8.80
1985	8.00	8.00	8.00	8.00	7.81	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.69
1986	7.50	7.50	7.10	6.83	6.50	6.50	6.16	5.82	5.50	5.50	5.50	5.50	6.33
1987	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.93	6.00	6.00	6.00P	

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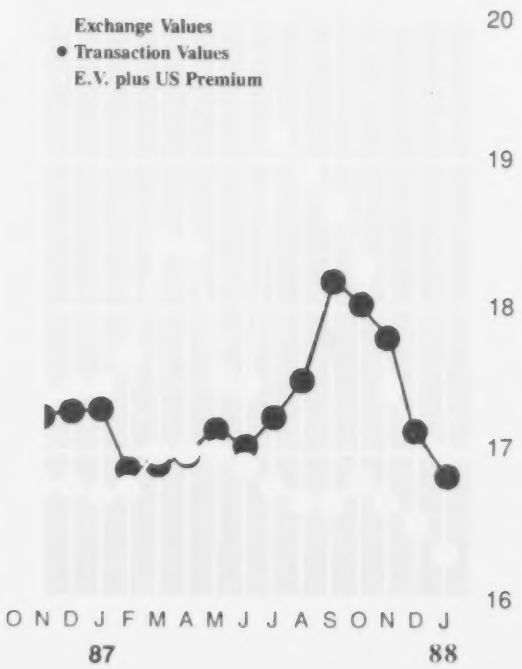

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MONTHLY REPORT ON THE NUCLEAR FUEL MARKET

February 1988 No. 234

R. GENE CLARK, *EDITOR* CHARLES B. LEWIS, *ASSISTANT EDITOR*

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To Our Readers

* * *

Nuexco is very pleased to announce that Robert L. Bovey has joined our staff. Bob will be in charge of Nuexco's newly-formed Washington, D.C. office, where he will be responsible for several of Nuexco's new business developments, including providing information and consulting services to US Government agencies, foreign embassies and corporate offices in the Washington area.

Before joining Nuexco, Bob was Director of International Trade Services for the accounting and consulting firm, Coopers and Lybrand. Previously, he served in various positions in Washington, becoming intimately familiar with the government processes that produce the policies controlling the US nuclear industry. These positions included service as Military Assistant to the Secretary of Defense and other high-level government offices.

Bob received his nuclear power training in the Navy, where he worked in submarine engineering and commanded a nuclear submarine, before moving to Washington. He holds a PhD in Operations Research from The Johns Hopkins University.

Nuexco's Washington area office is located in the suburb of Alexandria, Virginia, near the Washington National Airport. The telephone number is (703) 549-0880.

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EXECUTIVE SUMMARY
REPORT 234
(All data as of January 31, 1988)

Exchange Value $16.30, down $0.25

The **Exchange Value** is **$16.30** per pound U_3O_8, down $0.25 since last month. The US Premium (relative to the Exchange Value) is $0.70, up $0.05 since last month.

UF_6 Value $46.50, down $0.50

The **UF_6 Value** is **$46.50** per kilogram U as UF_6, down $0.50 since last month. The US Premium (relative to the UF_6 Value) is $1.25, down $0.75 since last month.

Transactions

Eight recent natural uranium sales are reported, involving **8.0 million** pounds equivalent U_3O_8. Six of the sales involved spot or near-term delivery, and met the conditions for inclusion in the Transaction Value. In addition, two long-term uranium sales are reported. Active spot and near-term **uranium supply** amounts to **5.9 million** pounds U_3O_8 equivalent, up 1.9 million pounds since last month. Active spot and near-term **uranium demand** totals **1.6 million** pounds, down 765,000 pounds from last month. The spot and near-term **supply-demand ratio** increased to **3.6 to 1**.

Transaction Value $16.85, down $0.35

The **Transaction Value** is **$16.85** per pound U_3O_8, **down $0.35** since last month. The calculation includes 19 transactions involving a total of 2.4 million pounds U_3O_8 and equivalent UF_6, of which 800,000 pounds are US-origin, and covers a period of 3 months.

Loan Rate 3.5%, unchanged

The **Loan Rate** is **3.5 percent** per annum, unchanged. No loan transactions are reported.

Conversion Value $1.90, unchanged

The **Conversion Value** is **$1.90** per pound U as UF_6, unchanged since last month. Active secondary market supply for conversion services for delivery within three years totals 370 thousand pounds U as UF_6. Active demand totals 200 thousand pounds U as UF_6. Two secondary market conversion transactions are reported.

SWU Value for delivery within one year: $73, unchanged

The **SWU Value** at .3% tails assay and for delivery within one year is **$73** per SWU, unchanged since last month. One secondary market SWU transaction is reported.

* * *

Argentina

Although it has only two operating reactors, with a third under construction, Argentina possesses a diverse nuclear industry that includes reactor design and equipment fabrication, heavy water production, uranium mining, enrichment capability, fuel fabrication and reprocessing. Argentina's uranium output has been below reactor requirements in recent years, but increased investment in production could considerably raise production.

Reactors

Twenty six reactors, in ten countries, began commercial operation in 1987, adding approximately 26,000 MWe of nuclear capacity worldwide.

USA

The US Congress has passed a compromise legislation package that directs DOE to focus its efforts to find a site for a high-level nuclear waste repository on Yucca Mountain, Nevada, previously one of three candidate sites.

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NUEXCO REPORT 234 FIGURES OF THE MONTH (January 31, 1988)	This Month (Report 234)	Last Month (Report 233)	12 Months Ago (Report 222)
Exchange Value ($US per pound U_3O_8)	16.30	16.55	16.65
US Premium for the Exchange Value ($US per pound U_3O_8)	0.70	0.65	0.85
UF_6 Value ($US per kilogram U as UF_6)	46.50	47.00	47.75
US Premium for the UF_6 Value ($US per kgU as UF_6)	1.25	2.00	—
Transaction Value ($US per pound U_3O_8 equivalent)	16.85	17.20	17.35
Loan Rate (Per Annum)	3.5%	3.5%	3%
Conversion Value ($US per pound U as UF_6)	1.90	1.90	1.80
Near-Term Uranium Supply[1] (millions of pounds U_3O_8)	5.9	4.7	3.8
Near-Term Uranium Demand[2] (millions of pounds U_3O_8)	1.6	2.4	2.1
Near-Term Supply-Demand Ratio	3.6	2.0	1.8
Recent Uranium Sales:[3]			
Number of Transactions	8	14	4
Quantity of Material (Millions of pounds U_3O_8 equivalent)	8.0	7.0	3.6
Nuexco SWU Value: ($US per SWU)[8]			
at 0.3 tails assay	73	73	80
US DOE SWU Prices: ($US per SWU)			
USEC	117.00[4]	117.00[4]	119.00[5]
AFC	153.00[6]	153.00[6]	153.00[6]
Requirements	157.00[6]	157.00[6]	157.00[6]
Incentive Price	90.00[7]	90.00[7]	90.00[7]
Market Value of Enriched UF_6[8]: ($US per kgU as UF_6)			
2.5 w/o U_{235}	436	441	459
3.0 w/o U_{235}	557	563	588
3.5 w/o U_{235}	681	688	719
4.0 w/o U_{235}	806	814	852

[1]Active inquiries to sell, for delivery within 12 months after contract signing.

[2]Active inquiries to purchase, for delivery within 12 months after contract signing.

[3]Uranium sales only; does not include loans, conversion, or SWU transactions.

[4]Effective since 10/1/87.

[5]Effective since 10/1/86.

[6]Effective since 10/1/84.

[7]Effective since 10/1/86, for up to 30% of annual requirements.

[8]Calculated using the Nuexco Exchange Value, Conversion Value, SWU Value and 0.30 percent tails assay.

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January 31, 1988	Market Values	Active Supply[1] (thousands)	Active Demand[1] (thousands)
EXCHANGE VALUE	**$16.30**/lb. U_3O_8	5,940	1,630
US Premium	**$0.70**		
UF_6 VALUE	**$46.50**/kgU		
US Premium	**$1.25**		
CONVERSION VALUE	**$1.90**/lb. U as UF_6	370	200
SWU VALUE			
0.3 tails assay:	**$73**/SWU	420	210
LOAN RATE	**3.5%**/annum	8,550	0

TRANSACTION VALUE

$/lb. U_3O_8	Millions of Pounds	Number of Transactions	Number of Months
16.85	**2.4**	**19**	**3**

[1]Supply and demand tables in the *Current Market Data* section of this Report detail the numbers for each category.

DEFINITIONS

1. The **Exchange Value** is Nuexco's judgment of the price at which transactions for significant quantities of natural uranium concentrates could be concluded as of the date indicated.
2. The **UF_6 Value** is Nuexco's judgment of the price at which spot and near-term transactions for significant quantities of natural uranium hexafluoride could be concluded as of the date indicated.
3. The **Conversion Value** is Nuexco's judgment of the price at which spot and near-term transactions for significant quantities of conversion services could be concluded in the secondary market as of the date indicated.
4. The **SWU Value** is Nuexco's judgment of the price at which spot and near-term transactions for significant quantities of enrichment services could be concluded as of the date indicated.
5. The **Loan Rate** is Nuexco's judgment of the annual interest rate at which uranium loans could be concluded as of the date indicated.
6. The **Transaction Value** is a weighted average price of recent natural uranium sales transactions. The calculation is based on prices paid in:
   a. Transactions closed within the previous three month period for which delivery is scheduled within one year of the transaction date;
   b. At least ten transactions;
   c. Transactions involving a sum total of at least 2 million pounds U_3O_8 equivalent.

The sample time is extended as necessary to include these minima. Other currencies are converted to US dollars using conversion rates in effect on or near the transaction date.

7. The **US Premium** is Nuexco's judgment of the incremental price (relative to the Exchange Value or UF_6 Value, as applicable) at which transactions for significant quantities of natural uranium could be concluded as of the date indicated, if the buyer will accept only US-origin.

DERIVATIONS AND COMMENTS

1. All Market Values are based on:
   a. Data from recently completed transactions.
   b. Data from pending transactions.
   c. Firm bids to buy or borrow, and firm offers to sell or lend.
   d. Prices purchasers or rates borrowers have expressed a willingness to pay, but for which Nuexco is not aware of firm bids to buy or borrow, and prices sellers or rates lenders have expressed awillingness to accept, but for which Nuexco is not aware of firm offers to sell or lend.
2. Prices associated with deliveries under old or renegotiated contracts or other than arm's-length transactions are not included in the determination of these Market Values.
3. In the determination of prices, Nuexco does not consider transportation charges other than those customarily provided by suppliers .
4. The prices of services or materials delivered under long-term contracts with primary suppliers are not considered in the determination of the listed values.
5. For the SWU Value, Nuexco converts SWU prices at varying tails and product assays to equivalent SWU prices at a tails assay of 0.30 weight percent U_{235} and a product assay of 3.0 weight-percent U_{235}, assuming feed costs corresponding to the Nuexco Exchange and Conversion Values determined as of the same date.
6. In calculating the Transaction Value, Nuexco does not account for the price of uranium delivered in connection with contracts which call for "market price" mechanisms. This exclusion applies particularly to contracts in which delivery prices are expressed as a function of future Exchange Values or any other indeterminate variable. Also excluded from the calculation are any other transactions in which the delivery price is defined in such a way that it cannot currently be determined.

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NATURAL URANIUM AND SECONDARY MARKET CONVERSION

(All data as of January 31, 1988)

The **Exchange Value** is **$16.30** per pound U_3O_8, down $0.25 since last month. US-origin uranium is commanding a **premium** (relative to the Exchange Value) of **$0.70** per pound U_3O_8 (up $0.05) in the form of concentrates, and **$1.25** per kilogram U (down $0.75) in the form of UF_6. **Active supply** of natural uranium (concentrates and UF_6) for spot or near-term delivery totals **5,940,000** pounds U_3O_8 equivalent, up 1,190,000 pounds since last month. The corresponding figure for **active demand** is **1,630,000** pounds, down 765,000 pounds. The spot and near-term supply-demand ratio increased to 3.6 to 1.

The *Current Market Data* section of this Report lists eight natural uranium sales, totaling approximately 8.0 million pounds U_3O_8 equivalent.

The **Transaction Value** is **$16.85** per pound U_3O_8, down $0.35 since last month. The calculation extends over a 3-month period and includes 19 transactions involving 2.4 million pounds equivalent U_3O_8.

The **UF_6 Value** is **$46.50** per kilogram U in UF_6, down $0.50 since last month. Four transactions involving UF_6 are reported, totaling approximately 400,000 pounds equivalent U_3O_8.

The **Conversion Value** is **$1.90** per pound U as UF_6, unchanged since last month. Active supply of secondary market conversion services totals 370,000 pounds U as UF_6. Active demand totals 200,000 pounds U as UF_6. Two secondary market conversion transactions are reported.

The **Loan Rate** is **3.5 percent** per annum, unchanged since last month. No loan transactions are reported.

* * *

The **Exchange Value** declined $0.25, to $16.30 per pound U_3O_8 this month. The U_3O_8 market was relatively quiet during January, and one seller offering substantial discounts below last month's Exchange Value failed to generate buyer interest. What little demand existed was largely discretionary. At least three US utilities have indicated that they were prepared to purchase non-US-origin uranium for 1988 delivery, although none of them appears willing to act quickly, and at least two of those buyers would consider natural UF_6 to meet their requirements.

The spot and near-term market in Europe was quieter during January, primarily for three reasons:

1. The 1987-1988 winter in Europe has been warm; consequently seasonal power demand has been relatively low, reducing fuel requirements.
2. Both the Exchange Value and the US dollar appear to be stable or declining; thus, few buyers are motivated to act because of anticipated price volatility.
3. Several European utilities purchased material on the spot market during 1987, reducing near-term sales opportunities.

In the Far East, no spot market activity has been reported since December, when one utility purchased a substantial quantity of non-US-origin U_3O_8 at a price near the current Exchange Value.

The **Premium** (relative to the Exchange Value) for US-origin U_3O_8 remained relatively stable during January, increasing $0.05, to $0.70 per pound U_3O_8. The slight increase in the US Premium does *not* reflect a strengthening of the market for US-origin material. Rather, the change indicates a level of $17.00 for buyers specifying only US-origin concentrates, a decrease of $0.20 since last month, when the combined Exchange Value and US Premium was $17.20. Two spot and near-term U_3O_8 transactions are reported this month, both of US-origin concentrates, totaling less than 200,000 pounds U_3O_8.

Following the US Supreme Court's decision in early January to review the US Producer vs. DOE litigation, sellers have become more aggressive, but as yet, US producers have been unwilling to offer prices below the $17.00 level. However, with little real demand for US-origin uranium, and weaker prices for non-US-origin material, the $17.00 level is coming under added pressure and could easily break down if sellers unwilling to risk waiting for the resolution of the current political or legal uncertainties decide to move inventories. No buyers in the current market are known to have restricted their inquiries to US-origin material.

US utilities also have reacted to the news of the Supreme Court's review of the Producers vs. DOE lawsuit. Some US utilities that may have considered taking action because of possible restrictions on enrichment of non-US-origin material (such as swapping origins, buying additional US-origin uranium for inventory, or purchasing non-US-origin uranium for near-term enrichment needs), are now considering normal procurement strategies.

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The **UF_6 Value** declined $0.50 to $46.50 per kgU as UF_6 during January, and three sales of non-US-origin UF_6, involving approximately 400,000 pounds equivalent U_3O_8, are reported, at prices at or below last month's UF_6 Value. One large seller of UF_6 has concluded several spot sales in recent weeks, and as of the end of January, supply remained stable and the market continued to be relatively active, due to many buyers' preferences for UF_6 over U_3O_8.

The **Premium** (relative to the UF_6 Value) for US-origin UF_6 declined $0.75, to $1.25. One transaction is reported, involving a small quantity of US-origin UF_6. After several months of market activity, utility interest in US-origin UF_6 decreased sharply in January, and demand came almost entirely from two US utilities, one of which was nearing a purchasing decision at month's end.

Intermediaries have been the main suppliers of US-origin UF_6, although supply has been limited by those companies' ability to obtain UF_6 from inventories for spot sales. With relatively smaller supplies of US-origin UF_6 available in the spot market, UF_6 prices continue to be more volatile those of U_3O_8, and offering prices decreased in conjunction with weaker demand during January.

The US Producers vs. DOE Lawsuit and the FTA

The outcome of the two main external factors affecting the uranium market — the US Producers vs. DOE lawsuit and the US-Canada Free Trade Agreement (FTA)— are still very much in doubt, although the *minimum* timetables for their resolution are clearer now than they were last month. In early January, the US Supreme Court agreed to hear the US Producers vs. DOE case, but a ruling is not expected before May or June 1988. Thus, no restrictions on DOE's enrichment of non-US-origin uranium are likely to be enforced until at least that time.

The Free Trade Agreement currently is before the US Congress and the Canadian Parliament. In the USA, a coalition of groups from various industries affected by the FTA is opposing passage of the Agreement in its present form. Approval of the FTA depends on Congress passing the required implementing legislation, but the timetable for the implementing bill's introduction into Congress is still uncertain. The Reagan administration wants the bill introduced as soon as possible, but it must be introduced first by the House majority leader (Tom Foley, D-Washington) and then by the Senate majority leader (Robert Byrd, D-West Virginia). Political forces in Congress could forestall its introduction until somewhat later than the administration would like.

In addition, in terms of critical congressional support, passage of the FTA may depend on the prior passage of an omnibus trade bill, which probably will be approved by Congress between March and July 1988. President Reagan has stated that he would veto the omnibus bill, and a number of Canadian politicians have indicated that they might withdraw their support for the FTA if Canada is not exempted from omnibus trade legislation. Thus, the probable outcome of the FTA may not become apparent until at least June 1988. Since neither the Producers vs. DOE lawsuit nor the US-Canada Free Trade Agreement are likely to be resolved until at least mid-year, the near-term uncertainties that have affected the market over the past couple of years are now less pronounced.

* * *

The **Loan Rate** remained unchanged this month, at 3.5 percent per annum. The supply of material available for loan increased substantially in January, even though little or no firm demand for loans exists. No loan transactions are reported this month.

* * *

The **Conversion Value** remained unchanged this month at $1.90 per pound U as UF6. Two secondary market conversion transactions are reported, both by US utilities. Two European utilities currently are evaluating offers for conversion services, and several US utilities are interested in long-term supplies, but overall, near-term demand is weak. Prices for conversion in Europe remain significantly higher than in the USA.

ENRICHED URANIUM AND SWU

The **SWU Value** is $73 per SWU, unchanged since last month. The SWU market was thin in January, with only one buyer firmly in the market for a substantial quantity of SWU. A second buyer was evaluating offers, but represented discretionary demand. One SWU transaction is reported this month, involving a small quantity of SWU bought by a US utility.

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CURRENT MARKET DATA

EXCHANGE VALUE EXPRESSED IN SELECTED PRODUCER & CONSUMER CURRENCIES[1]

Country (currency)	per lb. U_3O_8 in Concentrates			per kg. U in Concentrates		
	This Month (Jan 31, 1988)	Last Month (Dec 31, 1987)	12 Months Ago (Jan 31, 1987)	This Month (Jan 31, 1988)	Last Month (Dec 31, 1987)	12 Months Ago (Jan 31, 1987)
Australia (dollar)	22.83	22.97	25.16	59.35	59.72	65.41
Belgium (comm. franc)	567.55	552.22	615.98	1,476	1,436	1,601
Canada (dollar)	20.81	21.55	22.33	54.09	56.02	58.05
EEC (ecu)	13.16	12.81	14.42	34.22	33.31	37.49
Finland (markka)	66.07	65.70	74.83	171.77	170.81	194.54
France (franc)	91.52	89.36	99.28	237.94	232.32	258.12
FRG (mark)	27.17	26.40	29.75	70.63	68.62	77.35
Italy (lira)	19,983	19,480	21,213	51,951	50,643	55,149
Japan (yen)	2,070	2,041	2,535	5,382	5,305	6,590
Netherlands (guilder)	30.50	29.71	33.57	79.28	77.23	87.27
South Africa (rand)	32.21	31.92	33.98	83.75	82.98	88.34
Spain (peseta)	1,843	1,801	2,122	4,790	4,683	5,517
Sweden (krona)	97.78	96.50	107.28	254.21	250.88	278.91
Switzerland (franc)	22.10	21.35	25.02	57.44	55.50	65.03
UK (pound)	9.15	8.91	10.83	23.78	23.16	28.14
US (dollar)	16.30	16.55	16.65	42.38	43.03	43.29

TRANSACTION VALUE EXPRESSED IN SELECTED PRODUCER & CONSUMER CURRENCIES[1]

Country (currency)	per lb. U_3O_8 in Concentrates			per kg. U in Concentrates		
	This Month (Jan 31, 1988)	Last Month (Dec 31, 1987)	12 Months Ago (Jan 31, 1987)	This Month (Jan 31, 1988)	Last Month (Dec 31, 1987)	12 Months Ago (Jan 31, 1987)
Australia (dollar)	23.60	23.87	26.22	61.35	62.06	68.16
Belgium (comm. franc)	586.70	573.91	641.88	1,525	1,492	1,669
Canada (dollar)	21.51	22.40	23.27	55.92	58.22	60.49
EEC (ecu)	13.61	13.32	15.03	35.38	34.62	39.06
Finland (markka)	68.30	68.28	77.98	177.57	177.52	202.72
France (franc)	94.61	92.87	103.46	245.96	241.45	268.97
FRG (mark)	28.08	27.43	31.00	73.01	71.32	80.60
Italy (lira)	20,657	20,245	22,105	53,704	52,632	57,467
Japan (yen)	2,140	2,121	2,642	5,563	5,514	6,868
Netherlands (guilder)	31.52	30.87	34.98	81.96	80.27	90.94
South Africa (rand)	33.30	33.17	35.41	86.57	86.24	92.05
Spain (peseta)	1,905	1,872	2,211	4,952	4,867	5,749
Sweden (krona)	101.08	100.29	111.79	262.78	260.74	290.63
Switzerland (franc)	22.84	22.19	26.07	59.38	57.68	67.77
UK (pound)	9.45	9.26	11.28	24.58	24.07	29.33
US (dollar)	16.85	17.20	17.35	43.81	44.72	45.11

[1]Calculated using currency exchange rates published in the *Wall Street Journal* on the last working day of the month.

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CONVERSION VALUE EXPRESSED IN SELECTED PRODUCER & CONSUMER CURRENCIES[1]

Country (currency)	per lb. U as UF_6			per kg. U as UF_6		
	This Month (Jan 31, 1988)	Last Month (Dec 31, 1987)	12 Months Ago (Jan 31, 1987)	This Month (Jan 31, 1988)	Last Month (Dec 31, 1987)	12 Months Ago (Jan 31, 1987)
Australia (dollar)	2.66	2.64	2.72	5.87	5.81	6.00
Belgium (comm. franc)	66.16	63.40	66.59	145.85	139.77	146.81
Canada (dollar)	2.43	2.47	2.41	5.35	5.45	5.32
EEC (ecu)	1.53	1.47	1.56	3.38	3.24	3.44
Finland (markka)	7.70	7.54	8.09	16.98	16.63	17.83
France (franc)	10.67	10.26	10.73	23.52	22.62	23.66
FRG (mark)	3.17	3.03	3.22	6.98	6.68	7.09
Italy (lira)	2,329	2,236	2,293	5,135	4,930	5,056
Japan (yen)	241.30	234.28	274.06	531.98	516.50	604.19
Netherlands (guilder)	3.55	3.41	3.63	7.84	7.52	8.00
South Africa (rand)	3.75	3.66	3.67	8.28	8.08	8.10
Spain (peseta)	214.79	206.81	229.42	473.52	455.95	505.78
Sweden (krona)	11.40	11.08	11.60	25.13	24.42	25.57
Switzerland (franc)	2.58	2.45	2.70	5.68	5.40	5.96
UK (pound)	1.07	1.02	1.17	2.35	2.25	2.58
US (dollar)	1.90	1.90	1.80	4.19	4.19	3.97

SWU VALUE AND UF_6 VALUE EXPRESSED IN SELECTED PRODUCER & CONSUMER CURRENCIES[1]

Country (currency)	SWU Value at 0.30% tails assay (Jan 31, 1988)	UF_6 Value per kg.U in UF_6 This Month (Jan 31, 1988)	UF_6 Value per kg.U in UF_6 Last Month (Dec 31, 1987)
Australia (dollar)	102.24	65.12	65.23
Belgium (comm. franc)	2,542	1,619	1,568
Canada (dollar)	93.18	59.35	61.19
EEC (ecu)	58.95	37.55	36.38
Finland (markka)	295.91	188.48	186.58
France (franc)	409.88	261.08	253.77
FRG (mark)	121.67	77.50	74.96
Italy (lira)	89,494	57,006	55,320
Japan (yen)	9,271	5,906	5,795
Netherlands (guilder)	136.58	86.99	84.36
South Africa (rand)	144.27	91.89	90.64
Spain (peseta)	8,252	5,257	5,116
Sweden (krona)	437.91	278.94	274.05
Switzerland (franc)	98.96	63.03	60.62
UK (pound)	40.96	26.09	25.30
US (dollar)	73.00	46.50	47.00

[1]Calculated using currency exchange rates published in the *Wall Street Journal* on the last working day of the month.

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